MIDWAY

July 1992
16-40025-101

MORTAL KOMBAT

OPERATIONS MANUAL

* Operation & Adjustments
* Testing & Problem Diagnosis
* Parts Information
* Wiring Diagrams & Schematics

Mortal Kombat Instructions

Insert two coins to start a game; insert one coin to continue.

In a two player game, the loser pays and the winner stays.

Press the Punch and Kit buttons to attack an opponent.

Use the joystick to make the screen player jump or duck, and move left or right.

Use joystick and button combinations to discover secret moves.

MORTAL KOMBAT

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MORTAL KOMBAT

SECTION
one

Operation

Safety Notices

The following safety instructions apply to all game operators and service personnel. Specific warnings and cautions will be found throughout this manual where they apply. We recommend that you read this page before preparing your game for play.

⚠ CAUTION

AC POWER CONNECTION. Before connecting the game to the AC power source, verify that the "line voltage selection chart" jumper wires are installed correctly for the line voltage in your area. For details, refer to Section 3.

PROPERLY GROUND THE GAME. To avoid electrical shocks, do not plug in the game until it has been inspected and properly grounded. MIDWAY games should only be plugged into a grounded 3-wire outlet. Shocks will also result, if the control panel is not properly grounded! After servicing any parts on the panel, assure that the ground wires are secure. Only then should you lock up the game.

DISCONNECT POWER DURING REPAIRS. To avoid electrical shock, disconnect the game from the AC power source before removing or repairing any part of the game.

USE THE PROPER FUSE. To avoid electrical shock, use the replacement fuse which is specified in the parts list for this game. The replacement fuse must match the original fuse in fuse type, voltage rating, and current rating.

MONITOR PRECAUTIONS. When removing or repairing the monitor, extra precautions must be taken to avoid electrical shock because high voltages may exist within the monitor circuitry and cathode ray tube (CRT) even after power has been disconnected. Do not touch internal parts of the monitor with your hands or metal objects! Always discharge the CRT by the following method: Attach one end of a large, well-insulated, 20-kV jumper to ground. Momentarily touch the free end of the grounded jumper to the anode by sliding it under the anode cap. Wait two minutes and discharge the anode again.

HANDLE FLUORESCENT TUBE AND CRT WITH CARE. If you drop a fluorescent tube or CRT and it breaks, it will implode! Shattered glass can fly eight feet or more from the implosion.

ATTENTION !

PROPERLY ATTACH ALL CONNECTORS. *Make sure that the connectors on each printed circuit board (PCB) are properly connected. If they do not slip on easily, do not force them. A reversed connector may damage your game and void the warranty. All connectors are keyed to fit specific pins on each board.*

Setup Procedure

INSTALLATION & INSPECTION

1. Remove all items from shipping container and set them aside. Inspect the exterior of the cabinet for any damage. Remove the shipping cleats from the bottom of the cabinet.

2. The keys are either taped to the coin return slot, or attached to joystick. Unlock and open the coin and cash box doors. Remove the leg levelers and spare parts which are stored in the cash box.

3. Tilt or lay the cabinet down. Locate the four threaded holes on the bottom of the cabinet (one in each corner), and install one leg leveler (with its hex nut) in each hole.

4. Stand the cabinet upright and make certain that it is in a stable position. Level the cabinet.

5. Remove the rear door of the cabinet. Inspect the interior for any signs of damage. Check all major assemblies to assure that they are mounted securely.

6. Refer to the game's Cabinet Wiring Diagram (section 3), and check to see that all cable connectors are correctly secured. DO NOT FORCE CONNECTORS. Watch for damaged connectors and avoid making reversed connections.

7. Determine the value of your line voltage with a meter. Then, check the power input wires to the main power supply transformer. Be sure they are connected to taps which correspond to your local line voltage value. If necessary, reconnect the power input wires to the transformer in accordance with the Tranformer Chart in section 3.

8. Lay the line cord (connected to the Power Chassis) in the slot along the bottom edge of the rear cabinet door. Replace the rear cabinet door. Close and lock the front coin and cash box doors.

9. Connect the line cord to a grounded (3-terminal) AC wall outlet.

10. Switch On the game, using the On/Off switch located on the upper left rear of the cabinet, to verify proper operation.

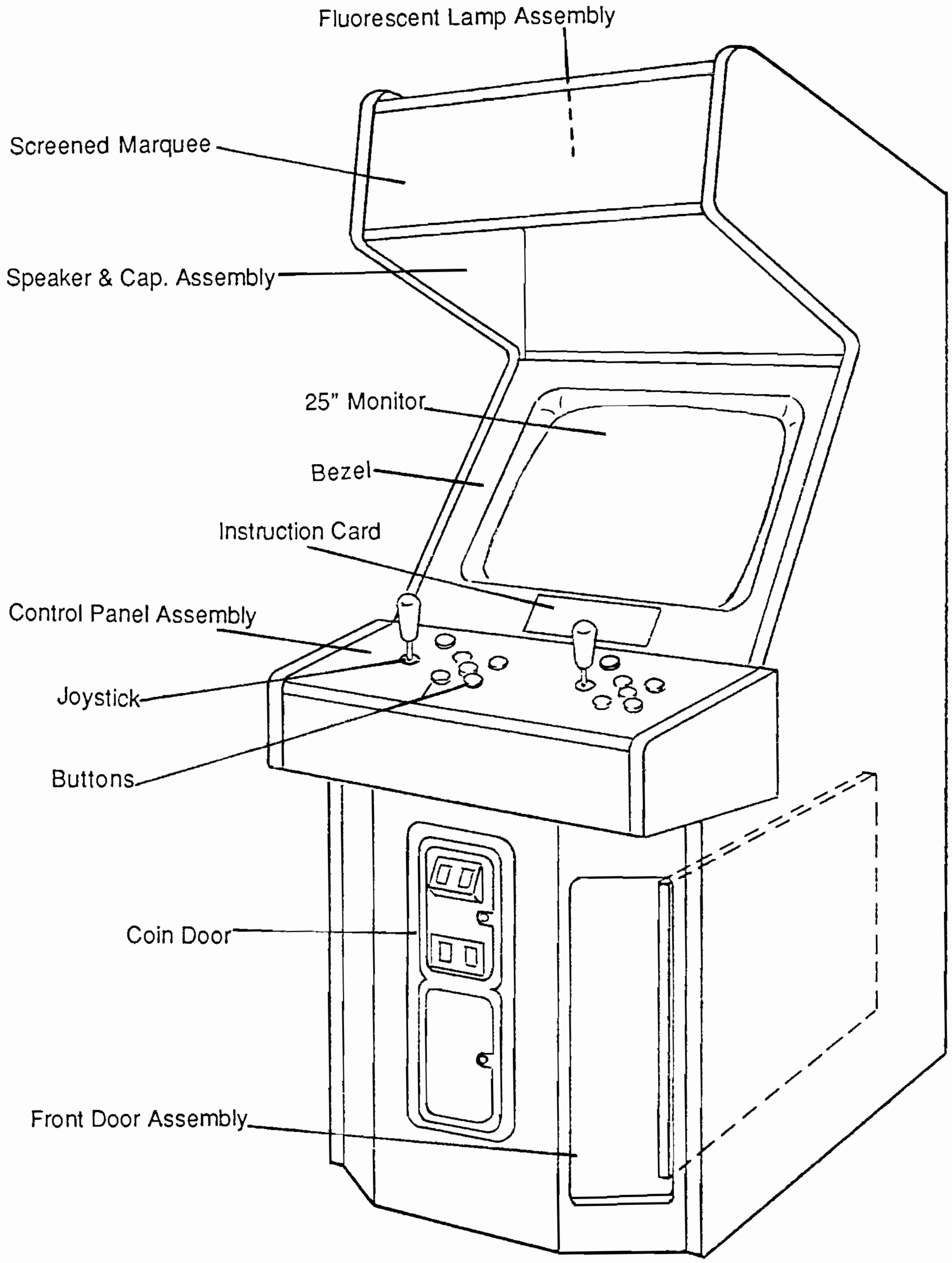
Game Location Requirements

Power
Domestic 115V @ 60 Hz
Foreign 230V @ 50 Hz

Temp.
32° F to 100° F
(0° C to 38° C)

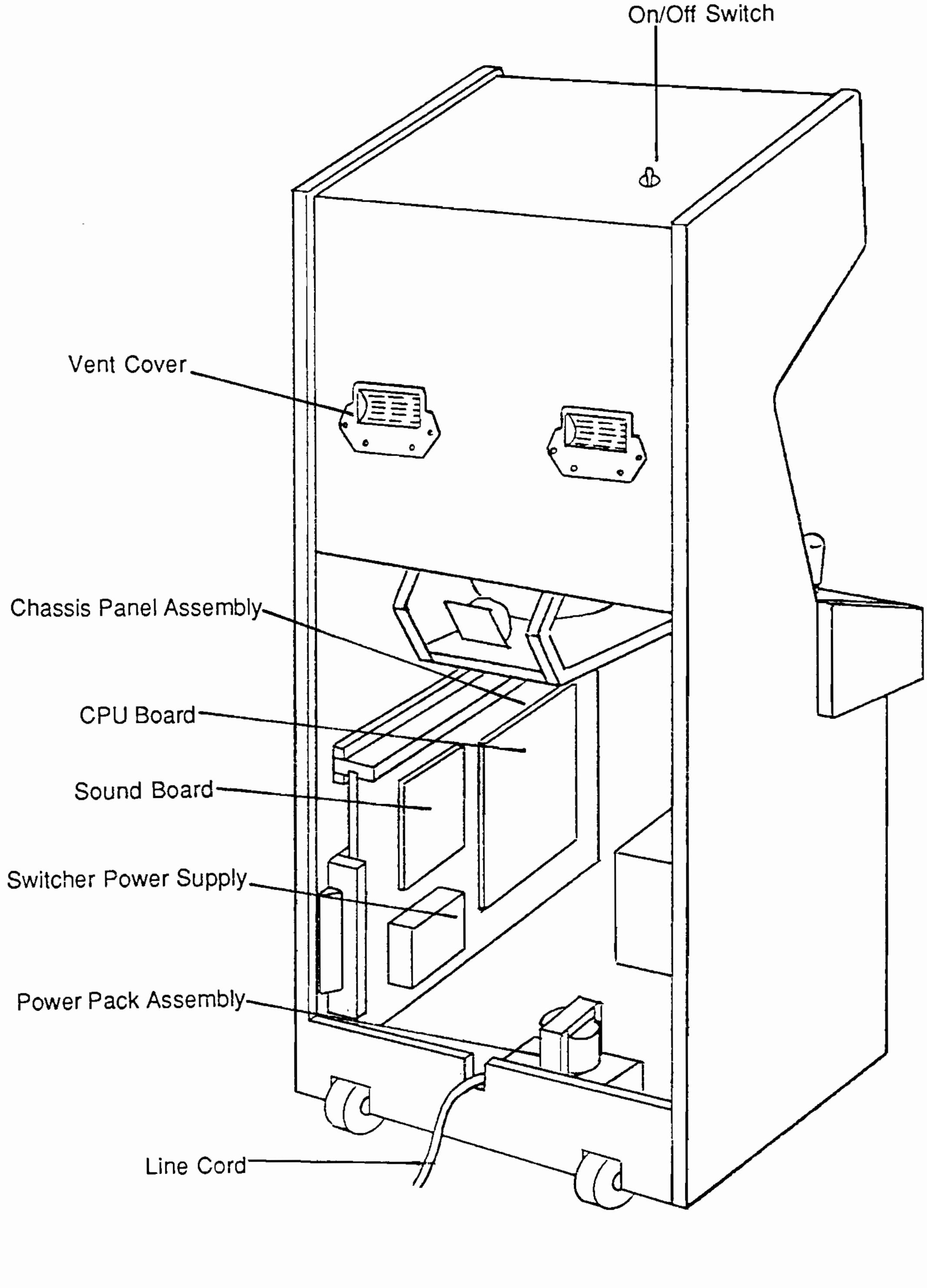
Humidity
Not to exceed 95% relative.

Cabinet Assembly



Front View

Cabinet Assembly



Rear View

Servicing

Servicing the Control Panel

Switch Off power to the game. The control panel is held in place by two latches (located inside the cabinet, on the left and right sides of the control panel) which provide constant pressure on the strikes. The latches can be reached through the coin door opening. To release the latches, lift the latch handle and unhook the wire fasteners. Carefully use the joysticks to lift the control panel. Tilt the control panel until it rests on its support bracket. To reinstall the control panel, check for proper cable connections, including the ground strap, and use the joysticks to lower it into position, avoiding pinched wires. Reclamp the latches.

Note

To remove the control panel for bench servicing, reach through the coin door opening and release the latches located on the sides of the control panel. Be careful not to reach straight back through the coin door opening as you might damage the Monitor Control Board. Tilt the control panel until it rests on its support brackets. Disconnect the cables and the ground strap. Lift the control panel out of the game cabinet.

⚠ Caution

The monitor DOES NOT contain an isolation transformer in its chassis (it is mounted instead in the Power Chassis Assembly located on the floor of the cabinet). When servicing the monitor on a test bench, YOU MUST ISOLATE THE MONITOR FROM THE LINE VOLTAGE WITH AN ISOLATION TRANSFORMER.

Removal of Viewing Glass

Switch Off power to the game, and open the control panel. Remove the five hex head screws and the black metal strip at the bottom of the viewing glass. Carefully, slide the glass from its side grooves and lift it clear of the cabinet.

Removal of Monitor Bezel

Switch Off power to the game. Open the control panel and remove the viewing glass. Lift the bezel off of the monitor.

⚠ Caution

While removing the four bolts, firmly support the monitor from the front of the CRT so that it will not slip.

Monitor Replacement

We recommend that you read the WARNINGS section thoroughly before beginning this procedure.

Switch Off power to the game. Remove the viewing glass and the monitor bezel. Completely disconnect the monitor from all of its cabling, including its chassis ground strap. Remove the four bolts securing the monitor's mounting flanges to its mounting panel. Pull the monitor carefully from the cabinet front.

Removal of the Marquee

Switch Off power to the game. Remove the five hex head screws from the black strip on top of the cabinet. Remove the strip and carefully lift the marquee. Store the marquee carefully to prevent damage.

The fluorescent tube is now accessible for replacement. Grasp the tube, give it a quarter turn, and remove it from its socket. Carefully place a new tube into the socket, and turn to reinstall.

WARNING

If you drop a fluorescent tube and it breaks, it will implode! Use care in handling.

Removal of the Fluorescent Light Assembly

Switch Off power to the game. Remove the marquee glass. Disconnect the fluorescent light assembly from its power cable. Remove the screws that hold the assembly to the cabinet then lift out the assembly.

Removal of the Speakers

Switch Off power to the game. Remove the marquee glass. The speakers pull out from the front of the cabinet. Be sure to disconnect the cabling and remove the nuts on the mounting screws before attempting to pull the speakers out of their enclosure. Carefully reinstall the seals upon completing any task in the speaker enclosure.

Volume Control, Test/Diagnostics Switch, and Service Credit Switch

Open the coin door to locate the game's volume control and Diagnostic switches on the small panel atop the cash box cover. The Volume Control is the white knob on left end of the panel. Turning the knob clockwise increases the volume. The upper right switch on the bracket is the Test/Diagnostics Switch that enables activating the game's Menu System. The lower right switch is the Service Credit Switch, which allows adding credits to a game for service testing without affecting the game's bookkeeping total.

Note

When an error is detected during Start-up Tests, game start-up does not progress, and an error message appears on the screen.

Game Features

STARTING UP

Switch on power to the game. A "rug" pattern appears on the CRT screen. When the "rug" pattern ends, the screen shows CHECKING SCRATCH RAMS, and then CHECKING ROMS. The next screen shows MORTAL KOMBAT REVISION LEVEL, CMOS TEST OK and the COIN SETTING. The game then begins the Attract Mode.

Insert the desired amount of coins or tokens. Press the appropriate Start button.

Player Controls

- **Start Buttons**
  Each player has a Start Button which allows him/her to begin or continue play.

- **High Kick/High Punch Buttons**
  Allows the screen player to kick or punch an opponent in the upper body.

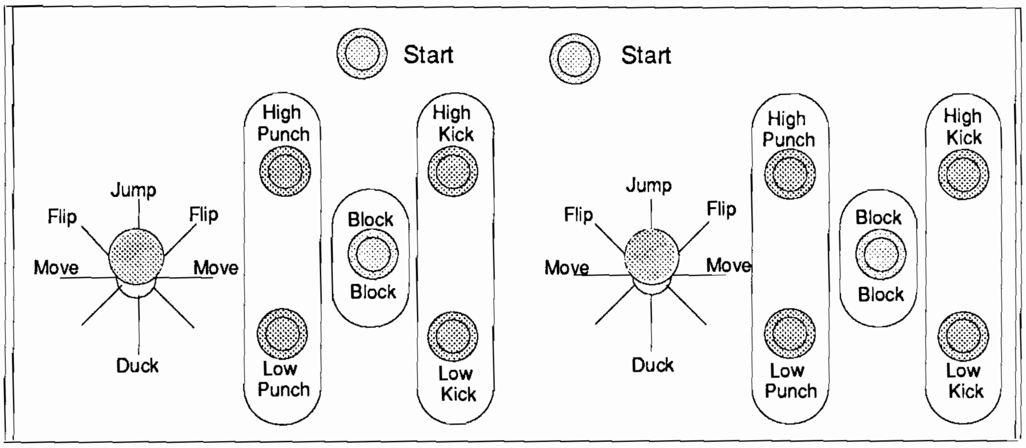
- **Low Kick/Low Punch Buttons**
  Allows the screen player to kick or punch an opponent in the lower body.

- **Block Buttons**
  Allows the screen player to block an opponent's punch, kick or special move.

- **Joystick**
  Allows the screen player to move, flip, jump and duck.

Note

Discover secret moves by using joystick and button combinations.



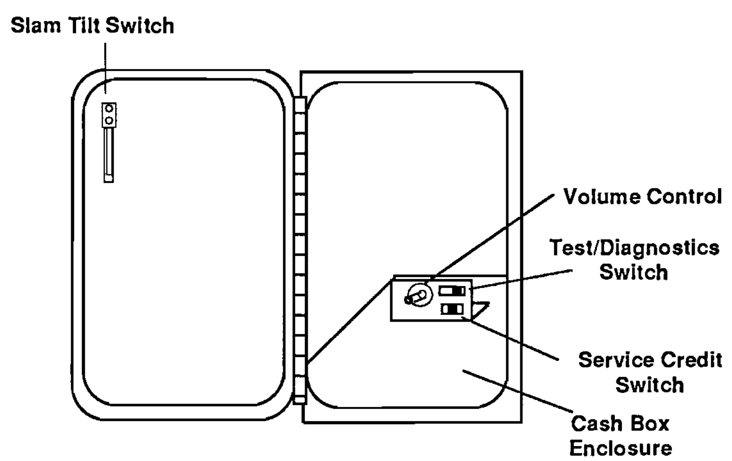
Control Panel

Game Operation

The MORTAL KOMBAT Control Switches are located inside the coin door. These switches allow the operator to customize some features of the game.

Control Switches

- The **Coin Door Slam Tilt Switch** detects any forceful vibrations against the Coin Door. This eliminates pounding for free games.
- The **Volume Control** allows increasing or decreasing the volume level of the game music and speech. For greater profits, set your game's volume level at a nice loud setting.
- The **Test/Diagnostic Switch** (slide switch) allows you to activate the game's Menu System. Move the Test Switch to access the Main Menu. To exit the Menu System, select EXIT TO GAME OVER from the Main Menu, then press any control panel button.
- The **Service Credit Switch** (pushbutton switch) is a special feature switch that allots credit without affecting the game's bookkeeping total.



Control Switch Locations

Menu System Operation

OPERATION

All MORTAL KOMBAT Game Audits, Adjustments, and Diagnostics are options of the Main Menu. Each option, in turn, has its own menu, listing several choices that you may act upon as desired.

Move the Test Switch (on the cashbox lid panel), or close Switch #8 of DIP Switch Bank #2, to activate the Main Menu (shown below). Game adjustments, bookkeeping, and diagnostics are all accessible from this menu.

Move any joystick up or down to cycle through the menu options. Notice that the options are highlighted in sequence. Press any button to activate a highlighted option.
Note: Only highlighted options can be activated.

Select With Any Stick
Activate with Any Button

Diagnostic Tests
Coin Bookkeeping
Game Audits
Game Adjustment
Utilities
Exit Test Menu

Main Menu

DIAGNOSTIC TESTS

To enter the Diagnostic Tests from the Main Menu, move any joystick to select (highlight) the Diagnostic Test option, and press any control panel button to activate the option.

Select With Any Stick
Activate With Any Button

Switch Test
DIP Switch Test
CPU Board Test
Sound Board Test
Monitor Patterns
Burn-in Test
Return To Main Menu

Diagnostic Menu

Switch Test

The Switch Test allows the operator to test the switches on the control panel and the coin door.

Select the Switch Test by using any joystick to highlight the Switch Test option; then, press any control panel button to activate it. The top of the screen shows a layout of the control panel and the bottom of the screen lists the coin door switches. Pressing a switch causes the corresponding switch location on the screen to light. Release the switch and the screen returns to normal.

Press the Start buttons together to return to the Diagnostic Menu.

DIP Switch Test

The DIP Switch Test allows the operator to check the position of the two 8-position DIP Switches on the CPU Board. The operator can also change the setting of each position of each DIP Switch during this mode.

Use any joystick to select the DIP Switch Test and any control panel button to activate it. The screen displays a layout of their current settings.

To change a DIP Switch setting, press the switch to the desired setting, then check the screen to verify that the switch now shows the new setting.

Press any control panel button to return to the Diagnostic Menu.

DIP Switch 1 Settings Table

	SW 1	SW 2	SW 3	SW 4	SW 5	SW 6	SW 7	SW 8
Violence On	Off * On							
Blood in game		Off * On						
Low Blow in game			Off * On					
Attract Sounds On				Off * On				
Not Used					Off * On	Off * On	Off * On	Off * On

DIP Switch 2 Settings Table

	SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8
DIP Switch Coin A	Off * On							
Coinage USA 1 / Ger 1 / Fr 1 USA 2 / Ger 2 / Fr 2 USA 3 / Ger 3 / Fr 3 USA 4 / Ger 4 / Fr 4 USA ECA / Ger ECA / Fr ECA N/U / N/U / N/U N/U / N/U / N/U Free Play / Free Play		Off * On Off On Off On Off On	Off * Off On On Off Off On On	Off * Off Off Off On On On On				
Country USA German French Not Used					Off * On Off On	Off * Off On On		
One Counter **Two Counters**							Off * On	
Not Used								Off * On

* Indicates Factory Setting

CPU Board Test

The CPU Board Test (much like the Start-up Test) allows the operator to check the RAMs and ROMs.

Select the CPU Board Test with any joystick; then, press any control panel button to activate the automatic test of the CPU Board's RAMs and ROMs. When this test is activated, a "rug'" pattern appears on the screen. The screen then changes to show the layout of the RAMs, and ROMs. A ROM or RAM location that is shown as black with a white outline is used and should turn either red or green. A ROM or RAM location that is shown as gray with a white outline is not used in this game. During the test, ROM or RAMs are good, if they turn green; they are faulty, if they turn red.

The CPU Test pauses when a bad ROM or RAM is detected. Press any button to continue the test.

Sound Board Test

The Sound Test allows listening to some of the sounds that this game is capable of producing. This test also emits a tone for each fault that is detected.

Select the Sound Board Test with any joystick; then, press any control panel button to activate the test. The screen displays two test options:

GENERAL TEST analyzes the sound circuitry. The screen shows a list of error codes. A successful test causes a single "tone" to sound. Detection of a fault causes a series of tones or no tone at all to sound.

PLAY SOUNDS tests synthesized & digitized sounds from the Sound Board. Advance to the next sound by moving any joystick, and press any control panel button to activate the sound.

Select RETURN TO MAIN MENU or BACK TO DIAGNOSTIC MENU. Press any control panel button to activate your selection.

General Test
Play Sounds
Back To Diagnostic Menu
Return To Main Menu

Sound Test Menu

Monitor Patterns

The Monitor Patterns Test provides a menu for testing the monitor. Select the test with any joystick and activate with any control panel button. Once the Monitor Patterns Test is activated, move any joystick to select a test option; press any control panel button to activate the option. Press any control panel button again to return to the Monitor Patterns Test menu.

Select With Any Stick
Activate With Any Button

Red Screen
Green Screen
Blue Screen
Color Bars
Crosshatch Patterns
Back To Diagnostic Menu
Return To Main Menu

Monitor Pattern Menu

The **RED, GREEN**, and **BLUE SCREEN** tests fill the screen with either red, green or blue.
The **COLOR BARS** test fills the screen with several shades of colors to help with red, green and, blue level adjustments. Each color should appear sharp and clear.
The **CROSSHATCH PATTERNS** test fills the screen with a grid and a series of dots. The grid and the dots should be clear. The dots should appear round.

If any of the Monitor Pattern Tests shows a need for adjustment, use the proper white knobs on the Monitor Board.

Use any joystick to select RETURN TO MAIN MENU or BACK TO DIAGNOASTIC MENU and activate with any control panel button.

Burn-in Test

The Burn-in Test continually repeats the CPU Board Test. Move any joystick to select the Burn-in Test; then, press any control panel button to activate the test. When the Burn-in Test detects an error, the test stops and displays an error message on the screen. The second page of the Audit Table specifies the number of Burn-in cycles successfully completed. Use this test to find intermittent CPU problems.

To exit this test, switch the game Off then On again.

COIN BOOKKEEPING

To enter the Coin Bookkeeping from the Main Menu, move any joystick to select the Coin Bookkeeping option; then, press any control panel button to activate it.

The Coin Bookkeeping Table records the coinbox totals and game play counters. The left side of the table names the bookkeeping item; the right side shows the number of coins, credits, or plays for each item.

To exit Coin Bookkeeping, move any joystick to select RETURN TO MAIN MENU; then, press any control panel button to activate it.

Left Slot Coins	0
Right Slot Coins	0
Third Slot Coins	0
Fourth Slot Coins	0
Service Credits	0
Paid Credits	0
Total Plays	0
Plays Until High Score Reset	5000

More Detailed Data
Return To Main Menu

Coin Bookkeeping Table

Left Slot Coins	0
Right Slot Coins	0
Third Slot Coins	0
Fourth Slot Coins	0
Total Collections	0

Clear Coin Meters
Return To Main Menu

Total Collection Table

GAME AUDITS

To enter Game Audits from the Main Menu, move any joystick to select the Game Audits option; then, press any control panel button to activate it. To advance to the next (or return to the previous) page of the Game Audit Table, move any joystick to select either "Next Audit Page", or "Previous Audit Page"; then, press any control panel button to change the page.

The Game Audits Table records the game play statistics. The left side of the table names the Audit item; the right side shows the amount of play.

Hours Game Was Played	0
Total Play Time	0
Hours Played With 1 Player	0
Hours Played With 2 Players	0
Total Plays	0
Continues Taken	0
Burn-in Loops Successfully Completed	0

Next Audit Page
Return To Main Menu

Page 1 of Audit Table

Cage Choosen	0
Kans Choosen	0
Raiden Choosen	0
Sub-zero Choosen	0
Scorpion Choosen	0
Sonya Choosen	0
Error Traps	0

Previous Audit Page
Return To Main Menu

Page 2 of Audit Table

To exit the Game Audit Table, move any joystick to select RETURN TO MAIN MENU; then, press any control panel button to activate your selection.

GAME ADJUSTMENTS

Move any joystick to select the Game Adjustment option on the Main Menu; then, press any control panel button to activate it.

The Game Adjustments Menu allows the owner/operator to change the Game Pricing and Game Difficulty.

The Game Adjustments Menu offers several options. Each option has several choices. Move any joystick to select an option; then, press any control panel button to activate that option. The next menu screen provides a setting choice. Move any joystick to modify the setting value; then, press any control panel button to lock in the new value and return to the Adjustment Menu. Move the joystick up to increase the setting value, move the joystick down decrease the setting value.

To exit the Adjustments Menu, use any joystick to select RETURN TO MAIN MENU; then, use any control panel button to activate your selection.

Select With Any Stick
Press Any Button To Modify

Return To Main Manu
Standard Pricing
Custom Pricing
Free Play
Computer Difficulty
Winning Streak Reset
Return To Main Menu

Game Adjustment Menu

Note

Game Adjustments are explained in more detail on the following page.

Adjustment values set by DIP Switch, override adjustment values set by the menu system.

Game Adjustments

Standard Pricing

Standard Pricing allows the operator to choose any of the "Standard" selections for the Standard Pricing Table. See page 1-19.

Modify the setting value with any joystick. Press any control panel button to lock in the new value and return to the Adjustment Menu.

Custom Pricing

Custom Pricing allows the operator to install pricing other than that of the Standard Pricing Table. Custom Pricing also allows the operator to select the maximum amount of credits per game, the amount of credits required to start a game, and the amount or credits required to continue a game. This option is being adjusted from the Dip Switch Settings. See page 1-20.

Modify the setting value with any joystick. Press any control panel button to lock in a new value and return to the Adjustment Menu.

Free Play

This option selects free play. The setting choices for this adjustment are:

- No (factory)
- Yes

Computer Difficulty

This option determines the difficulty level of game play. The setting choices for this adjustment are:

-1 (Extra Easy)
-2 (Easy)
-3 (Medium; factory)
-4 (Hard)
-5 (Extra Hard)

Winning Streak Reset

This option resets the highest scores after a selected amount of games are played. The setting choices for this adjustment are:

- Reset every 5,000 games.
- Reset every 10, 000 games (factory).
- Reset every 15, 000 games.
- Do Not Reset.

Standard Pricing Table

Name	Settings Credit/Coin	Left Chute	Center Chute	Right Chute	Fourth Chute
USA 1	1/25¢	25¢		25¢	
USA 2	1/50¢	25¢		25¢	
USA 3	1/50¢, 3/$1.00	25¢		25¢	
USA 4	1/50¢, 4/$1.00	25¢		25¢	
USA ECA	1/25¢, 4/$1.00	$ 1.00	10¢	25¢	5¢
German 1	1/1 DM, 6/5 DM	1 DM		5 DM	
German 2	1/1 DM, 7/5 DM	1 DM		5 DM	
German 3	1/1 DM, 8/5 DM	1 DM		5 DM	
German 4	1/1 DM, 5/5 DM	1 DM		5 DM	
German ECA	1/1 DM, 2/2 DM, 6/5 DM	5DM	1DM	2DM	
France 1	2/5 F, 5/10 F	5 F		10 F	
France 2	2/5 F, 4/10 F	5 F		10 F	
France 3	1/5 F, 3/10 F	5 F		10 F	
France 4	1/5 F, 2/10 F	5 F		10 F	
France ECA	1/3 X 1 F, 2/5 F, 5/2 X 5 F	1F	10F	5F	
Swiss	1/1 F, 6/5 F	1 F		5 F	
Italy	1/500 Lire	500 Lire		500 Lire	
UK 1	1/20 P, 3/50 P	20 P		50 P	
UK ECA	1/30 P, 2/50 P, 4/£1.00	£1.00	20P	50 P	
Spain 1	1/25 Peseta, 5/100 Peseta	25 Peseta		100 Peseta	10 P
Japan 1	1/100 Yen	100 Yen		100 Yen	

If option desired is not shown above, use custom pricing .

Custom Pricing

Select With Any Stick Press Any Button To Modify

Return To Adj. Menu (1) Left Chute Units (1) Right Chute Units (1) Third Chute Units (1) Fourth Chute Units (2) Units/Credits (3) Units/Bonus (4) Minimun Units Required (5) Credits To Start (6) Credits To Continue (7) Coins Per Dollar Maximum Credits Return To Adj. Menu

(1) Coins inserted accumulate units. This adjustment specfies the number of units given for each coin in the fourth chute (see "units/credit").

(2) This is the number of coin units required to buy one credit.

(3) One bonus credit is awarded after this many coin units have accumulated.

(4) No credits will be awarded until this many coin units have accumulated.

(5) Each player needs this many credits to begin a game.

(6) Each player needs this many credits to continue a game.

(7) The detailed bookkeeping screen shows total collections based on this many coins per dollar. (Set to zero to disable the display of money totals)

(8) This is the limit for the credits counter. Additional coins inserted will be lost (factory setting: 30)

UTILITIES

Move any joystick to select the Utilities option on the Main Menu; then, press any control panel button to activate it.

The Utilities Menu allows the owner/operator to clear the game's bookkeeping memory and to install a custom message.

Select With Any Stick Activate With Any Button
Clear Credits Clear Coin Counters Clear Game Audits Reset High Score Default Adjustments Full Factory Restore Return To Main Menu

Utilities Menu

Move any joystick to select an item from the Utilities Menu; then, press any control panel button to activate that item. After an item has been activated, you are given the option of resetting that item or not. For example,

CLEAR COIN COUNTERS ? **ARE YOU SURE ?** YES NO

Move any joystick to choose YES or NO; then, press any control panel button to lock in your choice and to return to the Utilities Menu.

To exit the Utilities Menu, move any joystick to select RETURN TO MAIN MENU; then press any control panel button to activate your selection.

Troubleshooting

Problem	Possible Solution
No Picture or Distorted Picture.	Check for faulty video board or monitor. Check for disconnected video signal cable.
Turn game On and nothing happens.	Check line fuse. Check for +5Vdc at pins C, D, 3, and 4 of the JAMMA Connector.
No sound.	Check the speaker and speaker connection to pins L and 10 on the JAMMA Connector. Check volume control setting. Check for +12V dc at pins F and 6 on the JAMMA Connector. Check interboard wiring from CPU Board to the Sound Board.
No General Illumination.	Check the 1A., S.B. fuse.
Move joystick and the screen player does not move.	Check for open wires between the joystick and CPU Board. Check for contamination on joystick switch contacts and CPU Board pins. Check for proper ground.
Press Start Button and nothing happens.	Check for open wires between the button and CPU Board. Check for contamination on CPU Board pins or the button switch blade contacts. Check for proper ground.
Press any control panel button and screen player does not move.	Check for open wires between the button and CPU Board. Check for contamination on CPU Board pins or the button switch blade contacts. Check for proper ground.
No credit given when coins are inserted.	Check DIP switch coin setting. Check for contamination on coin switch contacts. Check for an open wire between Coin Switch 1 and pin 16 on the JAMMA Connector or Coin Switch 2 and pin T of the JAMMA Connector.
Too many credits for number of coins inserted.	Check Game Pricing setting. Check for a short between pins T & 16 on the JAMMA Connector.
Game stays in test mode.	Check that the Test Switch in the coin door is set to Off.

MORTAL KOMBAT

SECTION
two

Parts

Cabinet Hardware

Cabinet Assembly	A-15639-40025
Shaft Caster	02-4404
Leg Leveler Plate	01-9155
Leg Adjuster, 3.0"	08-7377
Caster Wheel	20-9627
Power Switch Plate Assembly	A-15924
Power Switch	5640-13250-00
Front Door Assembly	A-14267
Latch Bracket	01-6994
Bezel & Instruction Card Set	A-15654
25" CRT Bezel	03-8497
Instruction Card	31-1697-40025
Coin Door Assembly	A-14975
Test Switch	A-13115
Coin Door Cable	H-14923
Coin Door, U.S.A.	09-20000-V-1
Line Voltage Cable Asembly	A-14201
Glass Retainer Bracket	01-9607
20" Vent Hole Cover	03-7602
Lamp Lock	03-8327
Glass Edge Channel	03-8358
Clear Glass	08-7456-4
Clear Glass	08-7456-10
Rear Door	11-1075
TAG Special Wrench	16-9074
Toggle Latch	20-9347
Long Arm Key T-20	20-9620
#555 Bulb, 6.3V	24-8768
Marquee	31-1644-40025
Marquee Retainer	03-8252-2

Speakers

Speaker & Cap Assembly	A-14968
Piezo Speaker Cable	H-14922
Speaker Cable	H-15701
Speaker Grille	01-10777
Cap. 10µf, non-pol, 50V,20%	5045-12914-00
Tweeter Speaker, 4Ω, 15W	5555-12924-00
6" Speaker, 4Ω, 25W	5555-12929-00

Manuals

Monitor Manual	16-3000-103
Instruction Manual	16-40025-101

PC Boards

Chassis Panel Assembly	A-14157-3
Y-Unit CPU Assembly	A-13234-40025
Power Supply Assembly	A-15202-1
Sound Board Assembly	A-14732-40025

Transformer Assembly

Power Pack Assembly	A-15916
Line Cord Assembly	A-15921
Power Pack Chassis Assy	A-15915
Power Pack Jumper Cable	H-13265
Transformer Jumper Cable	H-13378
Line Filter Jumper Cable	H-15922
G.I. Jumper Cable	H-15945
Varistor, 130V, 10J	5017-09044-00
Line Filter, 5 Amp	5102-10310-00
Power Transformer	5610-13326-00
Fuse, SB, 1A, 250V	5731-06569-00
Fuse, SB, 3A, 250V	5731-10356-00
Fuse Holder, Panel	5733-12869-00

Fluorescent Lamp Assembly

Fluorescent Housing & Bracket	C-12679
Housing Mounting Brkt	01-9146
Light Fixture	20-9590
18" Fluorescent Bulb, 15 W	24-8809

Control Panel

Housing & Control Panel Assembly	A-15644
Control Panel Assembly	A-15645
Plate	A-15638
Control Panel Cable	H-15669
Latch Bracket	01-6994
Latch Bracket	01-9605
Wood Control Panel	11-1076
Red Pushbutton	20-9687-1
White Pushbutton	20-9687-2
Blue Pushbutton	20-9687-3
8-way Joystick	20-9694-1
Screened Overlay	31-1696-40025
Wood Housing	11-1018-2
Toggle Latch	20-9347

Monitor

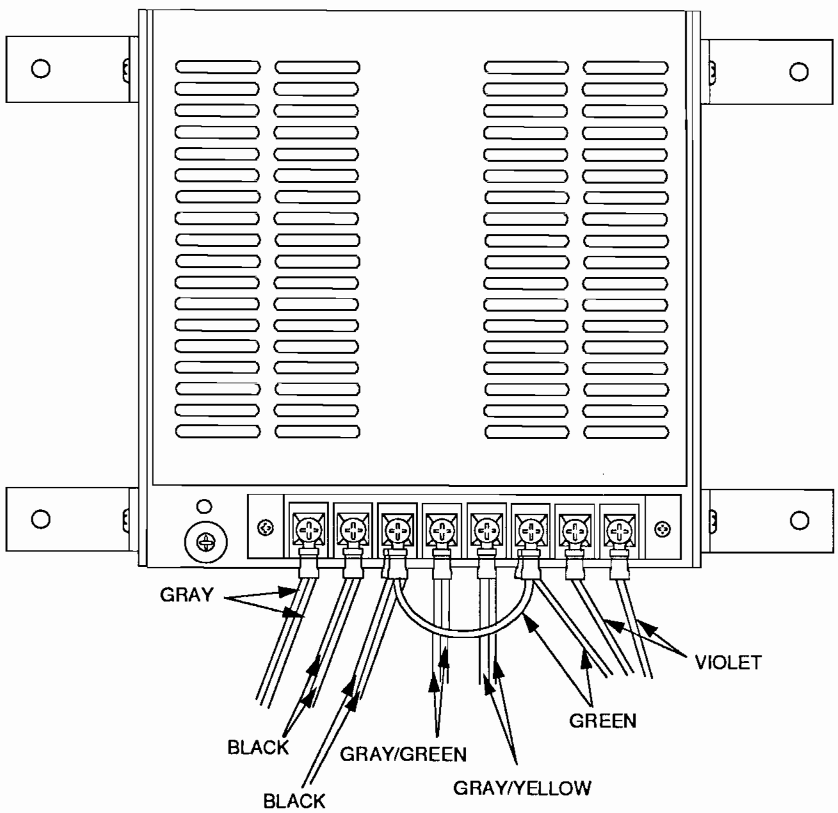
Monitor Support Bracket	01-9969
25" Monitor	5675-12787-01

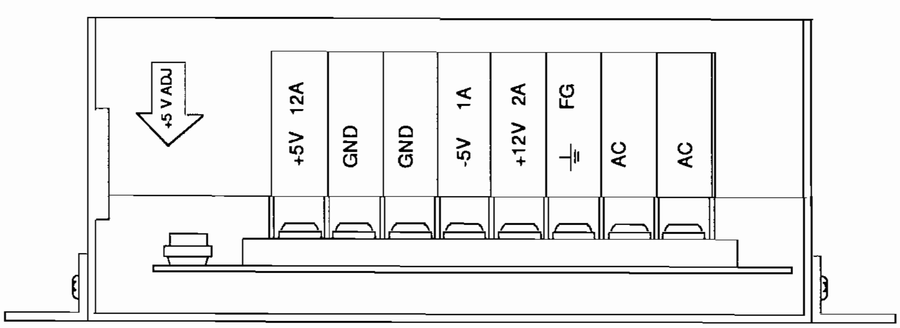
Cables

Power Pack Jumper	H-13265
Transformer Jumper	H-13378
Line Voltage Cable	H-14235
Piezo Speaker Cable	H-14922
Coin Door Cable	H-14923
Video Extension Cable	H-14924
Sound Power Speaker Cable	H-14925
Video Signal Cable	H-14949
Switch Power Cable	H-15203
Control Panel Cable	H-15669
Main Harness	H-15670
Speaker Cable	H-15701
Line Filter Jumper	H-15922
G.I. Jumper Cable	H-15945
20-pin Ribbon Cable	5795-10937-06

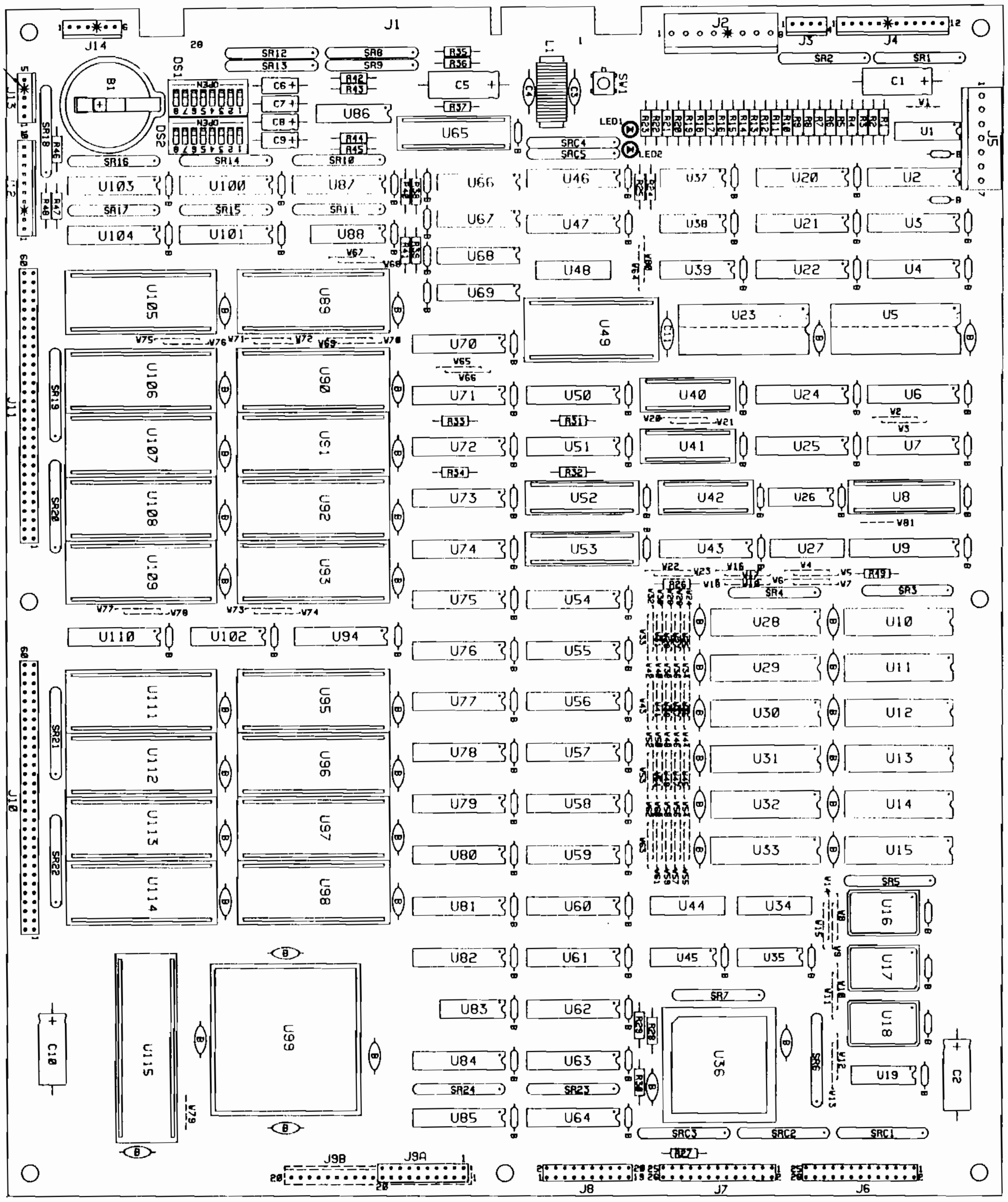
A-15202-1
Power Supply Switcher Assembly

Part Number	Description
H-15203	Switch Power Cable
01-10500	Mounting Bracket
01-10573	Shield
20-9700	P/S Switcher Supply





A-13234-40025
CPU Board Assembly

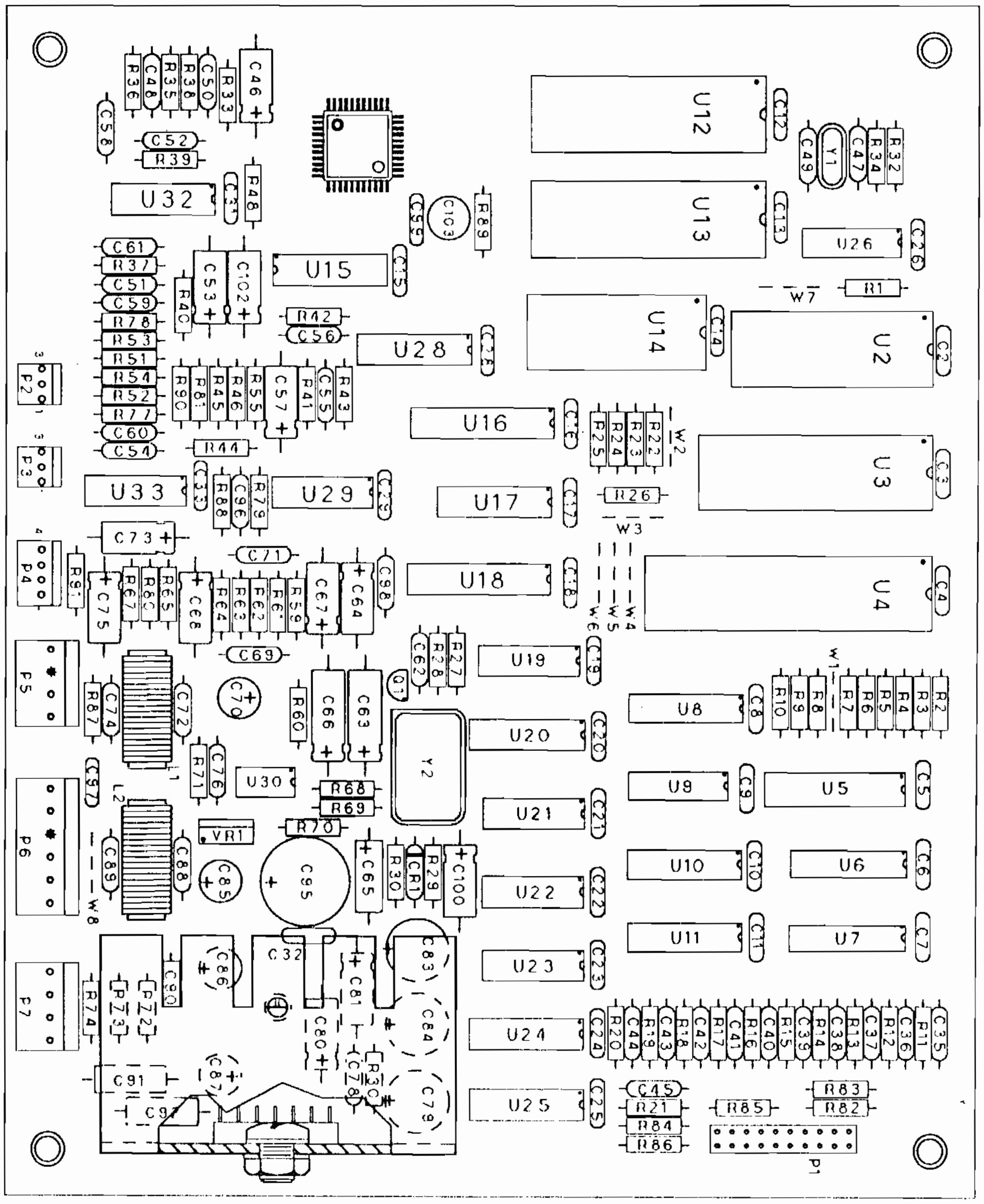


A-13234-40025
CPU Board Parts

Part Number	Designator	Description
5281-09737-00	U1	IC, 74LS86
5317-12211-00	U2, U20, U24, U43, U61, U62, U70	IC, 74ALS541
5317-12212-00	U3, U6, U7, U21, U25, U50, U58, U63, U64, U71, U72, U74, U79, U84, U85	IC, 74ALS574
5317-12208-00	U4, U22, U54-U57, U59, U60, U75-U78, U80, U81, U94, U110	IC, 74ALS245
5340-12840-00	U5, U23	IC, 8K x 8 Static RAM
5700-12047-00	U8, U52, U53, U65	24-pin Socket
5521-10421-00	U16	48Mhz Xtal
5521-10318-00	U17	24Mhz Xtal
5283-10468-00	U19, U45	IC, 74F74
5019-10849-00	U27, U34, U44, U48	100Ω DIP Res.
5286-13209-00	U35	IC, 74AS00
5700-12253-00	U36	68-pin Socket
5280-09309-00	U37	IC, 7407
5281-09487-00	U38	IC, 74LS74
5434-12255-00	U39	MAX691
5700-09915-00	U40, U41, U42	20-pin Socket
5311-12287-00	U46, U47, U87, U100 U101, U103, U104	IC, 74HC541
5700-10176-00	U49	28-pin Socket
5311-12285-00	U51, U73, U82	IC, 74HC573
5340-12014-00	U66-U69	IC, 4464 DRAM, 64 x 4
5283-10552-00	U83	IC, 74F04
5370-12602-00	U86	IC, ULN2064B
5317-12023-00	U88	IC, 74ALS138
5700-12088-00	U89-U93, U95-U98, U105-U109, U111-U114	32-pin Socket
5700-12254-00	U99	114-pin Socket
5317-12024-00	U102	IC, 74ALS139
5700-08985-00	U115	40-pin Socket
5010-08991-00	R1, R24, R27	4.7KΩ Res., 5%, 1/4W
5010-10204-00	R2, R7, R12	1KΩ Res., 2%, 1/4W
5010-10205-00	R3, R8, R13	2KΩ Res., 2%, 1/4W
5010-10000-00	R4, R9, R14	3.9KΩ Res., 5%, 1/4W
5010-09219-00	R5, R10, R15	8.2KΩ Res., 5%, 1/4W
5010-08772-00	R6, R11, R16	15KΩ Res., 5%, 1/4W
5010-09001-00	R23, R25	330Ω Res., 5%, 1/4W
5010-09036-00	R26, R29-R34, R50 R51	100Ω Res., 5%, 1/4W
5010-09416-00	R35-R37, R46-R48	470Ω Res., 5%, 1/4W
5010-08997-00	R38-R45	2.7KΩ Res., 5%, 1/4W
5010-09534-00	W2, W8, W11, W12, W14, W21, W22, W24, W27, W29, W30, W32, W34, W36, W39, W41, W42, W45, W47, W48, W50, W52, W55, W57, W58, W60, W62, W65, W68, W69, W71, W73, W75, W77, W80	0Ω Res., 1/4W
5043-08980-00	B	.01µf Cap., 10V, Axial
5040-08986-00	C1, C2, C5, C10	100µf Cap., 10V, Axial
5043-09845-00	C3, C4	.001µf Cap., 10V, Axial
5041-09243-00	C6-C9	10µf Cap., 10V, Axial
5043-08996-00	C11	.1µf Cap, Axial
5019-12611-00	SR1, SR3, SR8, SR9, SR12, SR13, SR18	470Ω SIP, 5 Res.
5019-09362-00	SR3, SR4, SR6, SR7, SR11, SR15, SR17, SR19, SR20, SR21, SR22, SR23, SR24, SRC1, SRC2, SRC3	4.7KΩ SIP, 9 Res.
5019-10143-00	SR5	470Ω SIP, 9 Res
5060-10396-00	SRC4, SRC5, SRC10, SRC14, SRC16	4.7KΩ SIP, 470pf

Part Number	Designator	Description
5671-09019-00	LED1, LED2	LED, Red
5551-09822-00	L1	Inductor, 4.7µH
5645-09025-00	DS1, DS2	DIP Switch 16-pin
5641-12551-00	SW1	Pushbutton Switch
5881-12315-00	B1	Battery Holder
5791-10862-08	J2	8-pin Connector
5791-12461-12	J4	12-pin Connector
5791-10850-00	J6, J7	26-pin Ribbon Connector
5791-09437-00	J8	20-pin Ribbon Connector
5791-12461-10	J12	10-pin Connector
5700-12252-00	U12-U15	24-pin Socket
5791-12461-05	J13	5-pin Connector
5791-12461-04	J3	4-pin Connector
5791-12461-20	J9A, J9B	20-pin Connector
5791-12461-04	J14	6-pin Connector
5880-11056-00	B1	Lithium Battery, 3A
03-8338-1		1/4" Spacer
A-5346-40025-1	U8	IC, PLD Color RAM Control
5400-12220-00	U36	IC, TMS34010, 50 GSP
A-5346-40025-2	U40	IC, PLD Address Decode
A-5346-40025-3	U41	IC, PLD Video RAM Control
A-5346-40025-4	U42	IC, PLD Local Control
5340-12558-00	U49	IC, 8K x 8 Static RAM, 150ns
A-5346-40025-5	U52	IC, PLD Video RAM Sequencer
A-5346-40025-6	U53	IC, PLD Image ROM Control
A-5346-40025-7	U65	IC, PLD Miscellaneous Control
A-5343-40025-1	U89	IC, Game EPROM
A-5343-40025-10	U105	IC, Game EPROM
A-5346-40025-8	U115	IC, PLD Autoerase Controller
5410-12239-00	U99	IC, Custom ASIC
5340-12213-00	U10-U15, U28-U33	IC, VRAM 64K x 4, 150ns
5341-13297-00	U111	IC, ROM
5341-13297-01	U95	IC, ROM
5341-13297-02	U106	IC, ROM
5341-13297-03	U112	IC, ROM
5341-13297-04	U96	IC, ROM
5341-13297-05	U107	IC, ROM
5341-13297-06	U113	IC, ROM
5341-13297-07	U97	IC, ROM
5341-13297-08	U108	IC, ROM
5341-13297-09	U114	IC, ROM
5341-13297-10	U98	IC, ROM
5341-13297-11	U109	IC, ROM

A-14732-40025
Sound Board Assembly



A-14732-40025
Sound Board Parts

Part Number	Designator	Description
5340-12958-00	U7, U11, U24	IC, 26LS31
5340-12959-00	U6, U10, U25	IC, 26LS32
5281-09850-00	U19	IC, 74LS11
5281-09215-00	U26	IC, 74LS04
5281-09851-00	U21	IC, 74LS14
5281-09487-00	U9, U22, U23	IC, 74LS74
5281-09745-00	U8	IC, 24LS138
5281-09246-00	U20	IC, 74LS139
5281-09733-00	U17	IC, 74LS174
5281-09486-00	U5, U16	IC, 74LS374
5340-12278-00	U2	IC, Static RAM, 8K x 8
5370-12260-00	U30	IC, 3340 Attenuator
5460-12743-00	VR1	IC, 7809 Regulator, +9V
5370-12960-00	U29	IC, LM324 Op Amp
5370-12730-00	U32, U33	IC, TL084 Op Amp
5371-12727-00	U15	AD7524 DAC
5370-12963-00	U31	HA13116 Pwr. Amp
5521-10931-00	Y2	8Mhz Oscillator
5520-09020-00	Y1	3.58 Mhz Crystal
5010-09534-00	W2, W3, W5,W7, W8	0Ω Resistor
5010-12961-00	R72-R74	3.3Ω Res., 5%, 1/2W
5010-09039-00	R89	10Ω Res., 5%, 1/4W
5010-10170-00	R11-R21	47Ω Res., 5%, 1/4W
5010-09036-00	R4, R30, R90	100Ω Res., 5%, 1/4W
5010-09187-00	R27	150Ω Res., 5%, 1/4W
5010-09160-00	R83	220Ω Res., 5%, 1/4W
5010-09416-00	R32, R43, R41, R82	470Ω Res., 5%, 1/4W
5010-09358-00	R43, R68	1KΩ Res., 5%, 1/4W
5010-08998-00	R22-R24, R26, R59, R61	2.2KΩ Res., 5%, 1/4W
5010-08983-00	R28	3.3KΩ Res., 5%, 1/4W
5010-10000-00	R87	3.9KΩ Res., 5%, 1/4W
5010-08991-00	R1-R3, R5-R10, R25, R84-R86, R91	4.7KΩ Res., 5%, 1/4W
5010-09219-00	R69	8.2KΩ Res., 5%, 1/4W
5010-09034-00	R62, R63, R67, R70, R80	10KΩ Res., 5%, 1/4W
5010-09269-00	R64	12KΩ Res., 5%, 1/4W
5010-09324-00	R68	27KΩ Res., 5%, 1/4W
5010-09325-00	R36	39KΩ Res., 5%, 1/4W
5010-09035-00	R29, R53, R81	47KΩ Res., 5%, 1/4W
5010-10987-00	R77, R78	56KΩ Res., 5%, 1/4W
5010-10650-00	R38, R45, R51	62KΩ Res., 5%, 1/4W
5010-08776-00	R31, R71	68KΩ Res., 5%, 1/4W
5010-10257-00	R35	75KΩ Res., 5%, 1/4W
5010-12927-00	R79	82KΩ Res., 5%, 1/4W
5010-09162-00	R33, R48, R54, R55, R60, R65	100KΩ Res., 5%, 1/4W
5010-12965-00	R39	130KΩ Res., 5%, 1/4W
5010-09134-00	R40, R44, R46, R52	150KΩ Res., 5%, 1/4W
5010-12964-00	R37, R42	820KΩ Res., 5%, 1/4W
5048-11027-00	C59, C60	33pf Cap., 10%
5043-10264-00	C50, C62	68pf Cap., 10%
5043-09492-00	C35-C45, C47, C49, C98	100pf Cap., 10%
5048-12748-00	C54, C61, C96	220pf Cap., 10%
5048-11030-00	C71	470pf Cap., 10%
5048-12506-00	C78	820pf Cap., 10%
5048-11031-00	C48,C55, C76	1000pf Cap., 10%
5048-11065-00	C69	2200pf Cap., 10%
5048-12967-00	C58	2700pf Cap., 10%
5048-11072-00	C51, C56	3300pf Cap., 10%
5048-12966-00	C52	3900pf Cap., 10%
5043-08980-00	C2-C26, C28, C29, C31-C33, C97, C99	.01µf Cap., 10%
5045-12926-00	C90-C92	.1µf Cap., 10%
5043-08996-00	C72, C74, C88, C89	.1µf Cap., 20%
5048-12036-00	C65	.22µf Cap., 10%
5040-09365-00	C68	1µf Cap.,
5040-09343-00	C46, C53, C57, C64, C67C73, C75, C81, C100, C102	10µf Cap., 16V, 20%
5040-09332-00	C63, C66, C80	47µf Cap., 25V

Part Number	Designator	Description
5040-09421-00	C70, C85-C87, C103	100µf Cap., 25V
5040-09506-00	C79, C83, C84	220µf Cap., 16V
5040-12670-00	C95	2200µf Cap., 16V
5070-08919-00	CR1	1N4148 Diode
5160-12891-00	Q1	MPS3646 Trans.
5551-09822-00	L1, L2	4.7µH Inductor, 3A
5700-09006-00	U28	16-pin Socket
5700-09915-00	U18	20-pin Socket
5700-09004-00	U14	24-pin Socket
5700-08985-00	U4	40-pin Socket
5700-12088-00	U3, U12, U13	32-pin Socket
5791-10862-04	P5, P7	4-pin Header
5791-10862-06	P6	6-pin Header
5791-09437-00	P1	20-pin Header
01-10516		Heat Sink
4406-01128-00		6-32 Hex Nut
4006-01003-06		6-32 x 3/8 P-PH-S
20-9690-18		Spacer, 1-1/8
A-5343-40025-19	U3	IC, EPROM
5400-10320-00	U4	IC, 68B09E, MPU
A-5343-40025-20	U12	IC, EPROM
A-5343-40025-21	U13	IC, EPROM
5370-11086-00	U14	IC, YM2151 Sound Generator
A-5346-40025-9	U18	IC, PLD Sound
5371-11087-00	U28	IC, YM3012 DAC
5433-12962-00	U1	IC, OKI6295, 4 Channel
03-8338-1		Mtg. Spacer, 1/4"

NOTES

MORTAL KOMBAT

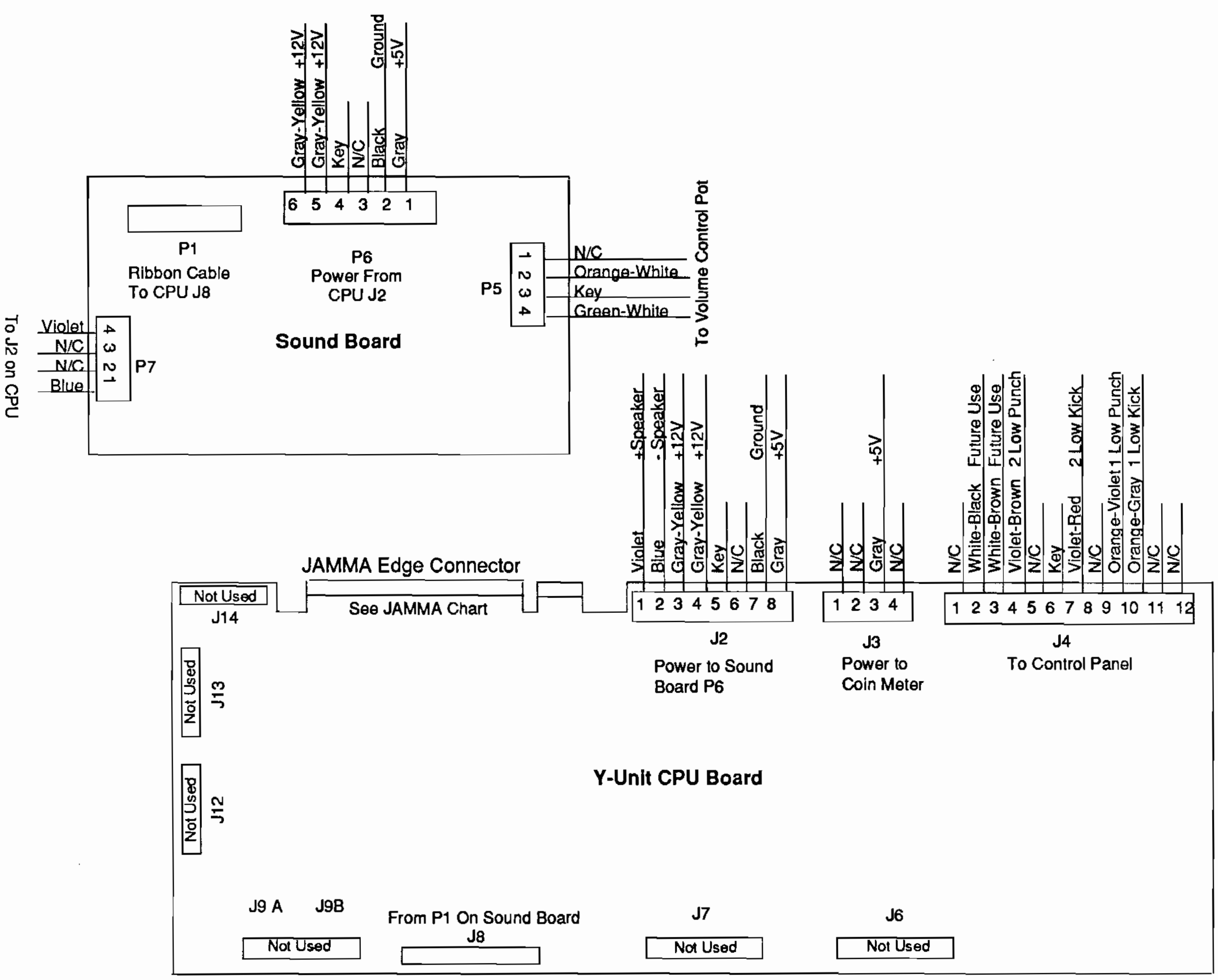
SECTION
three

Schematics and Wiring Diagrams

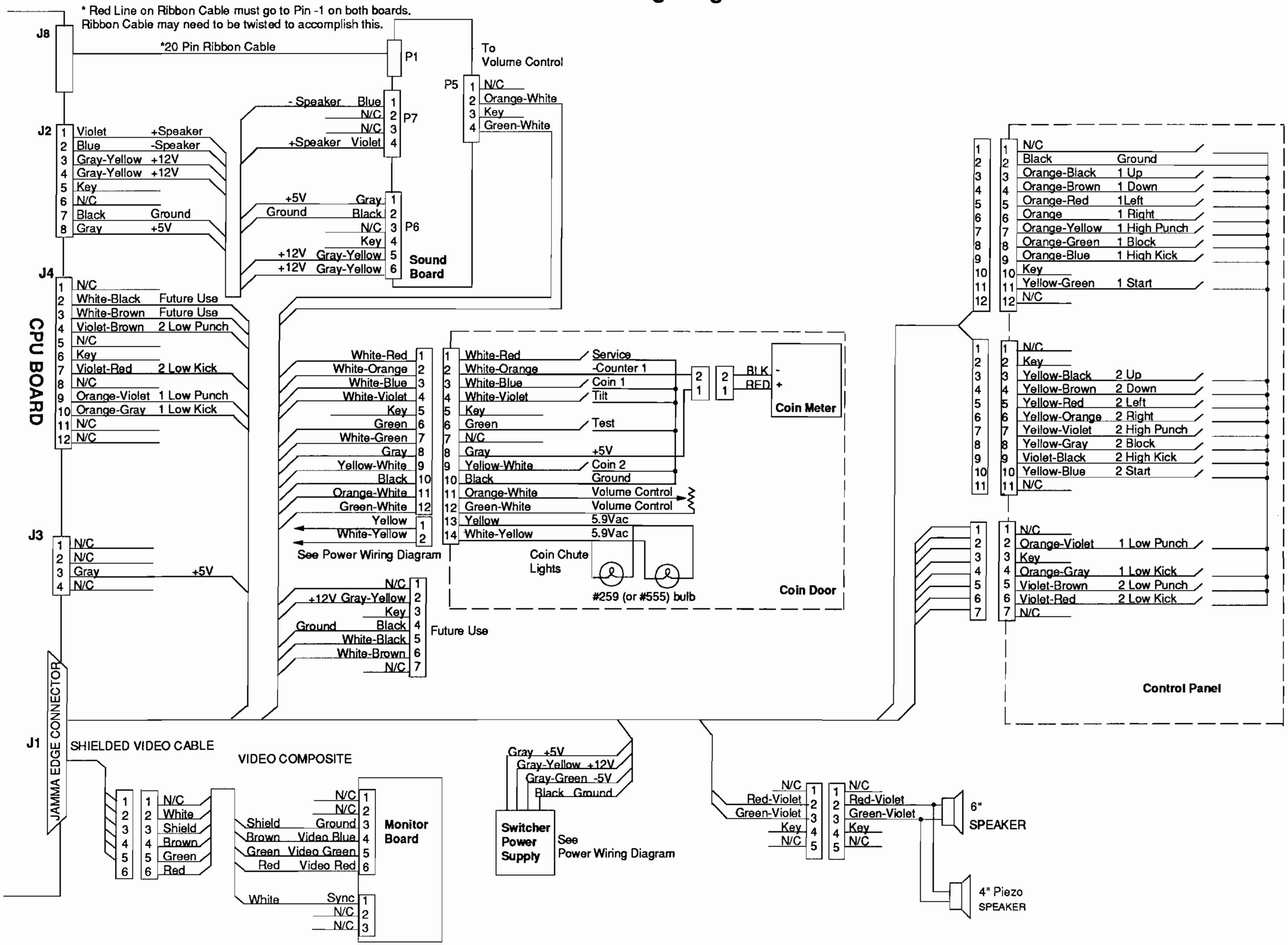
JAMMA Chart

Function	Wire Color	Pin	Pin	Wire Color	Function
Ground	Black	1	A	Black	Ground
Ground	Green-Brown	2	B	Black	Ground
+5 Volts DC	Gray	3	C	Gray	+5 Volts DC
+5 Volts DC	Gray	4	D	Gray	+5 Volts DC
-5 Volts DC	Gray-Green	5	E	Gray-Green	-5 Volts DC
+12 Volts DC	Gray-Yellow	6	F	Gray-Yellow	+12 Volts DC
	Key	7	H	Key	
Counter 1	White-Orange	8	J	White-Green	Counter 2
	N/C	9	K	N/C	
Speaker (+)	Red-Violet	10	L	Green-Violet	Speaker (-)
	N/C	11	M	N/C	
Video Red	Red	12	N	Green	Video Grn
Video Blue	Brown	13	P	White	Video Sync
Video Grd	Shield	14	R	White-Red	Service Credit
Test	Green	15	S	White-Violet	Slam Tilt
1 Coin	White-Blue	16	T	Yellow-White	2 Coin
1 Start	Yellow-Green	17	U	Yellow-Blue	2 Start
1 Up	Orange-Black	18	V	Yellow-Black	2 Up
1 Down	Orange-Brown	19	W	Yellow-Brown	2 Down
1 Left	Orange-Red	20	X	Yellow-Red	2 Left
1 Right	Orange	21	Y	Yellow-Orange	2 Right
1 High Punch	Orange-Yellow	22	Z	Yellow-Violet	2 High Punch
1 Block	Orange-Green	23	a	Yellow-Gray	2 Block
1 High Kick	Orange-Blue	24	b	Violet-Black	2 High Kick
N/C	N/C	25	c	N/C	N/C
N/C	N/C	26	d	N/C	N/C
Ground	N/C	27	e	N/C	Ground
Ground	Black	28	f	Black	Ground

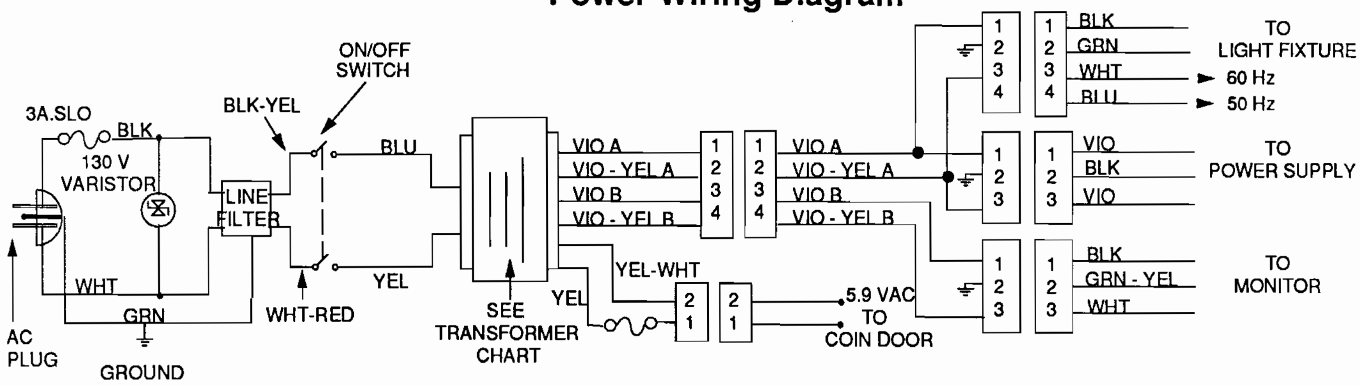
Interboard Wiring Diagram



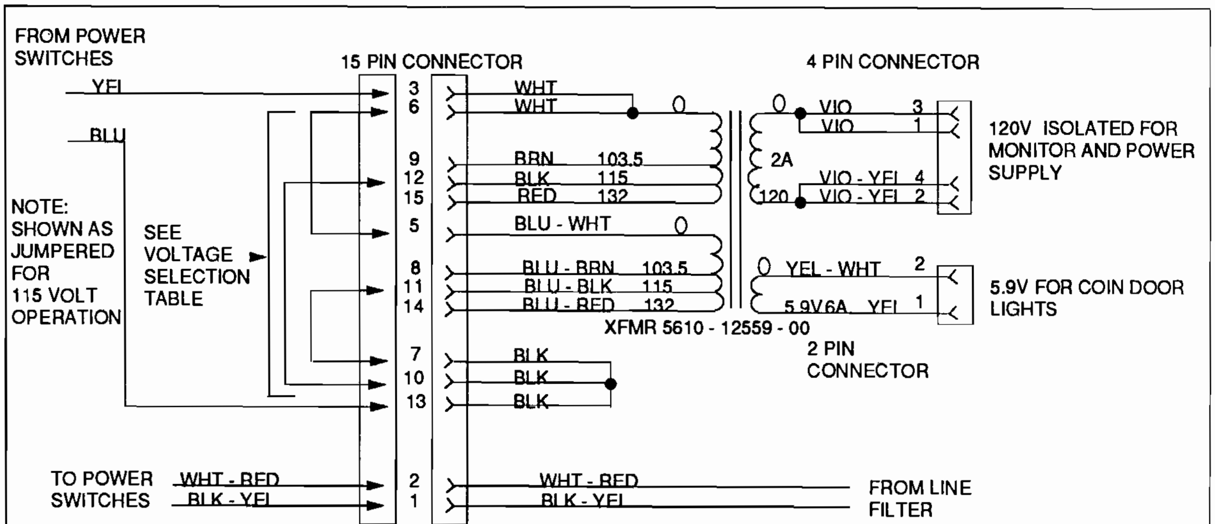
Cabinet Wiring Diagram



Power Wiring Diagram



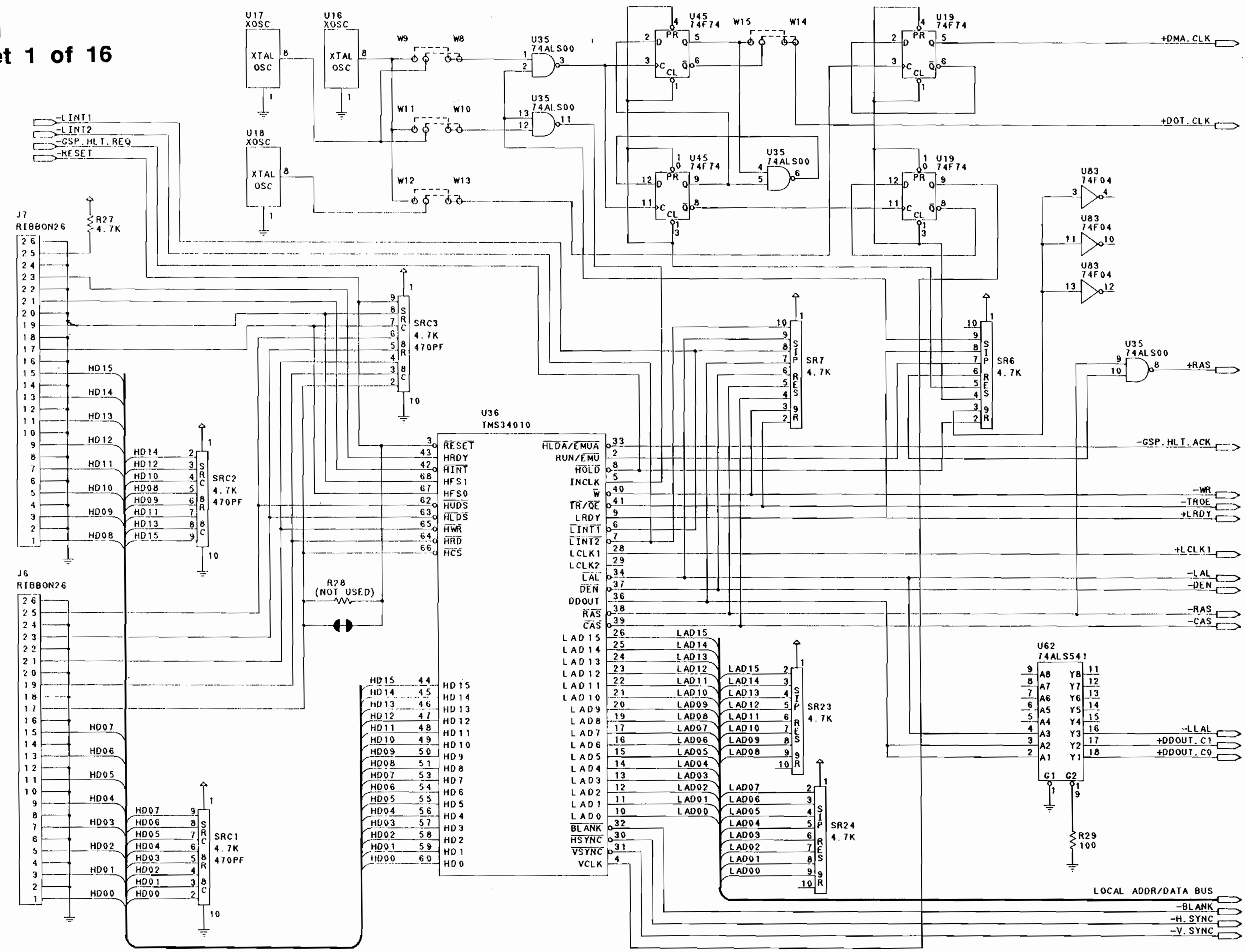
Transformer Chart



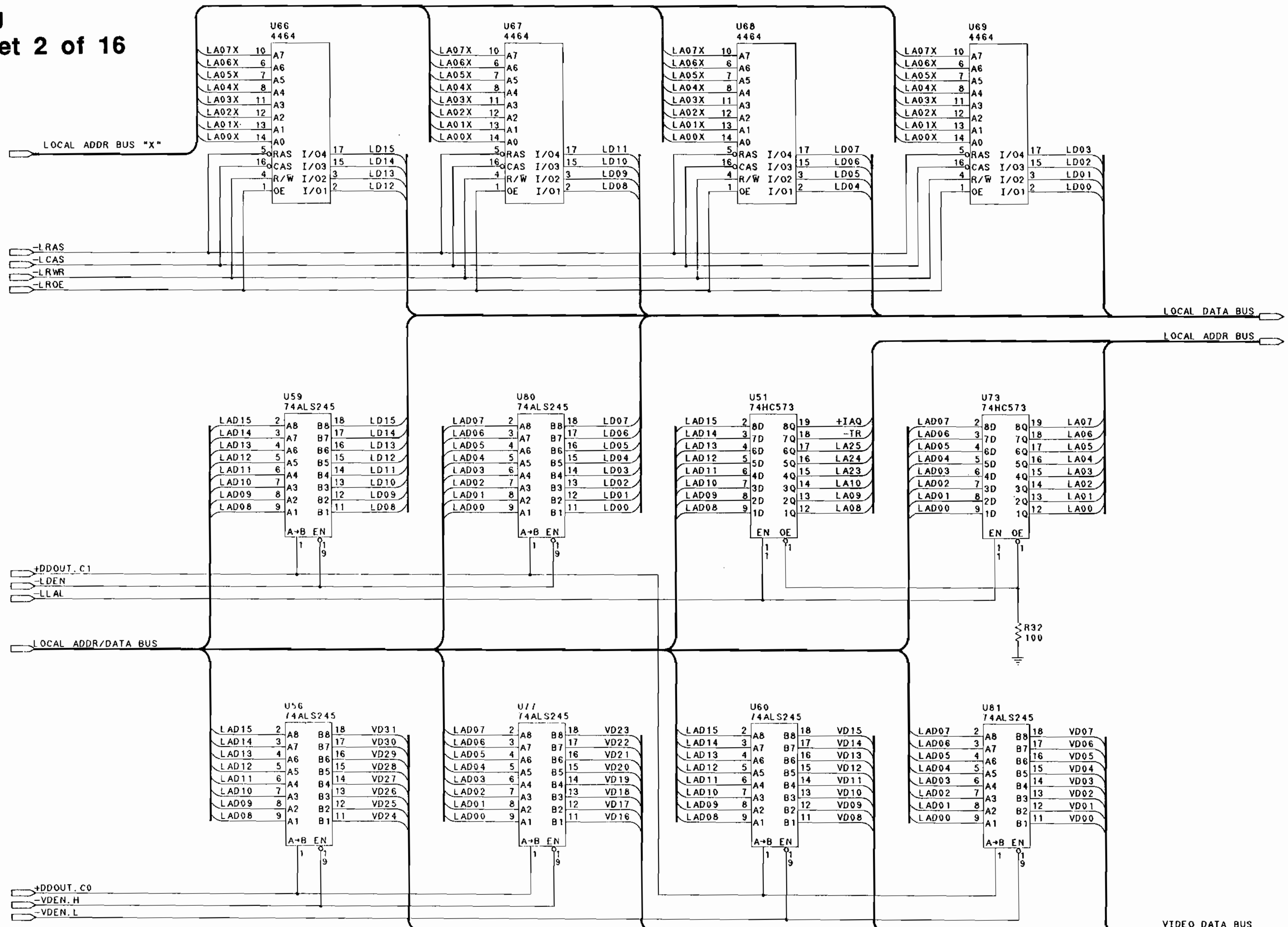
Voltage Selection Table

VOLTAGE	JUMPER PINS
103.5	5 - 6, 7 -8, 10 - 9
115	5 - 6, 7 - 11, 10 - 12
132	5 - 6, 7 - 14, 10 - 15
207	5 - 9, 10 - 8
218.5	5 - 9, 10 - 11
230	5 -12, 10 -11
247	5 - 12, 10 -14

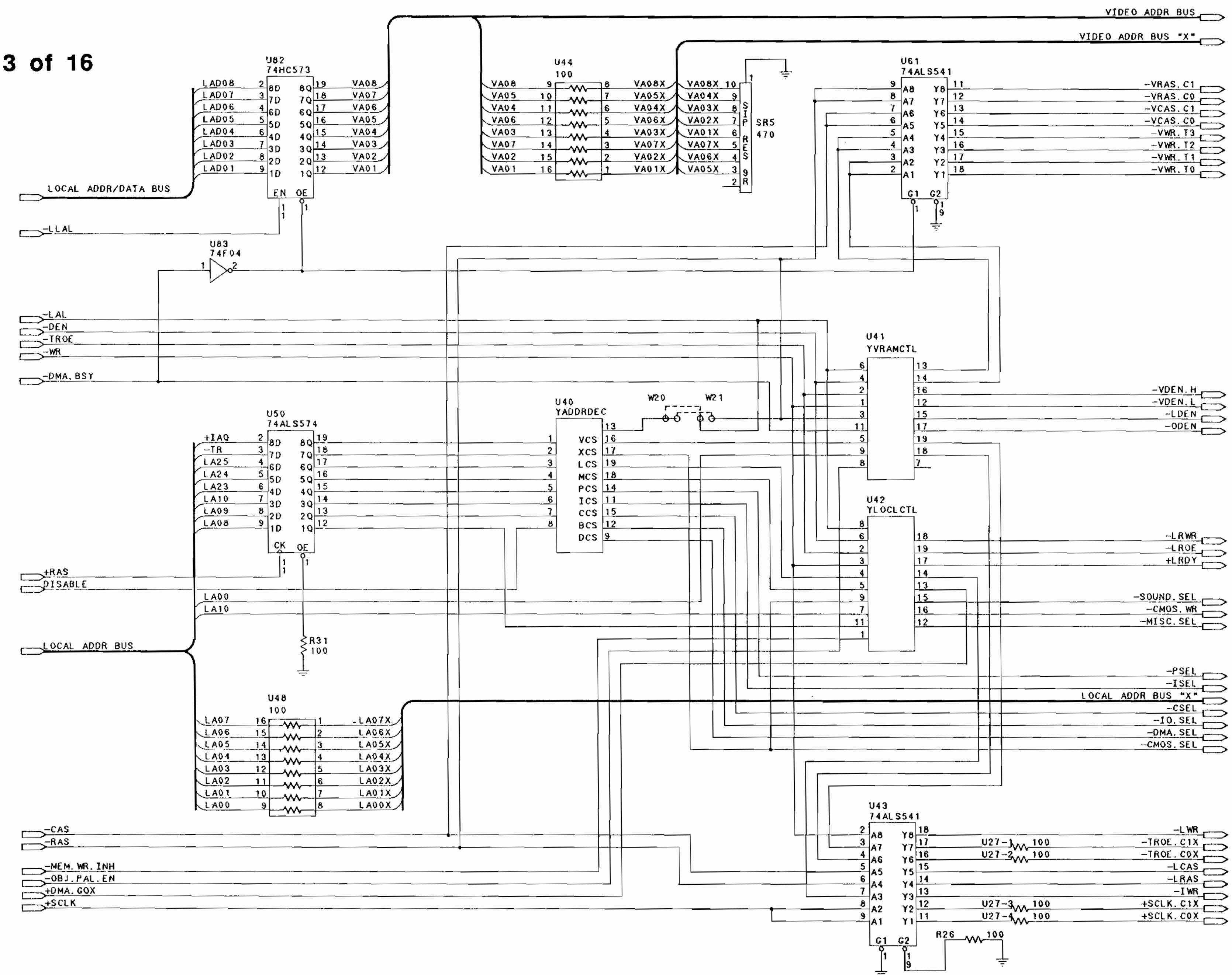
CPU
Sheet 1 of 16



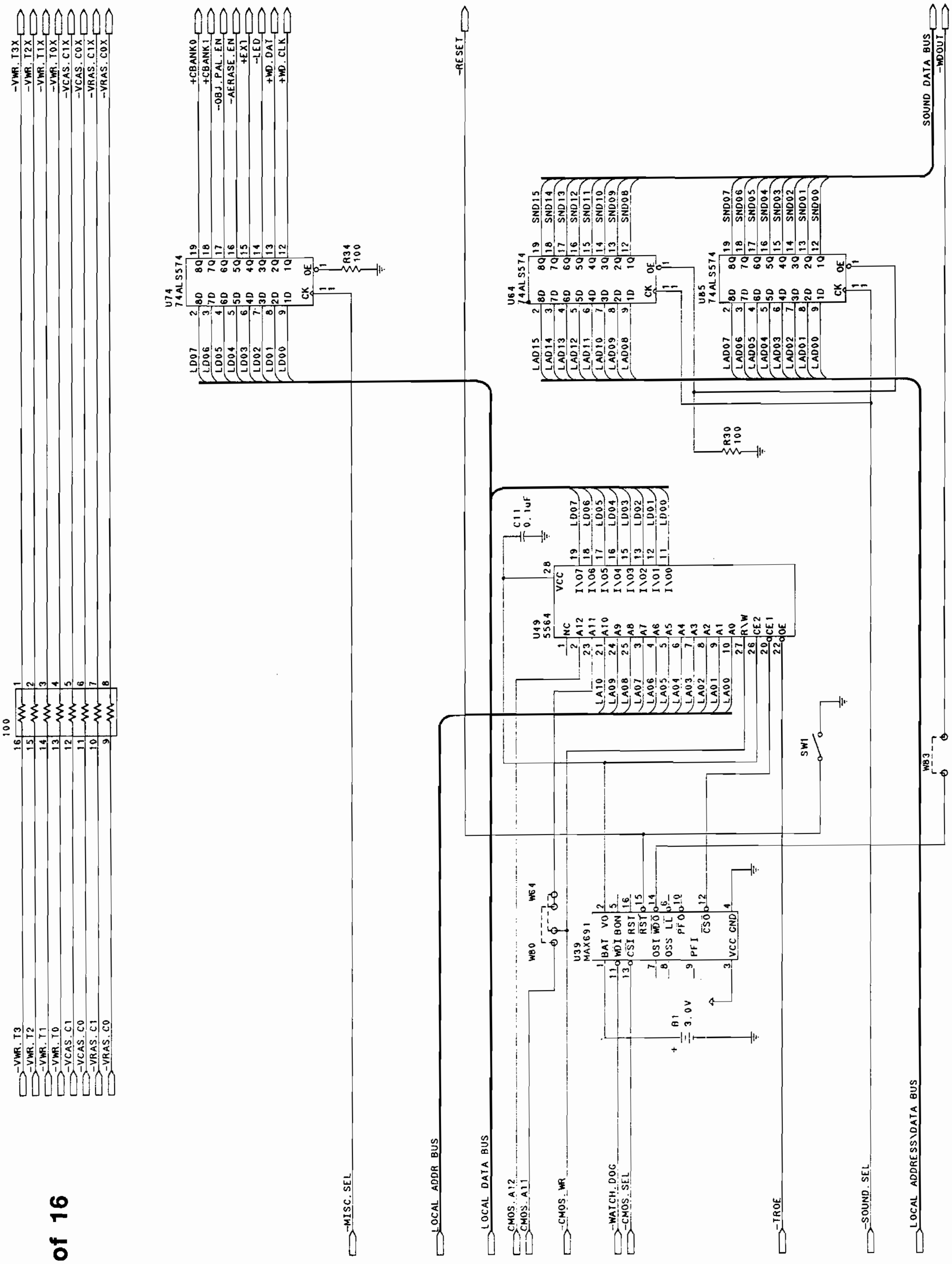
CPU
Sheet 2 of 16



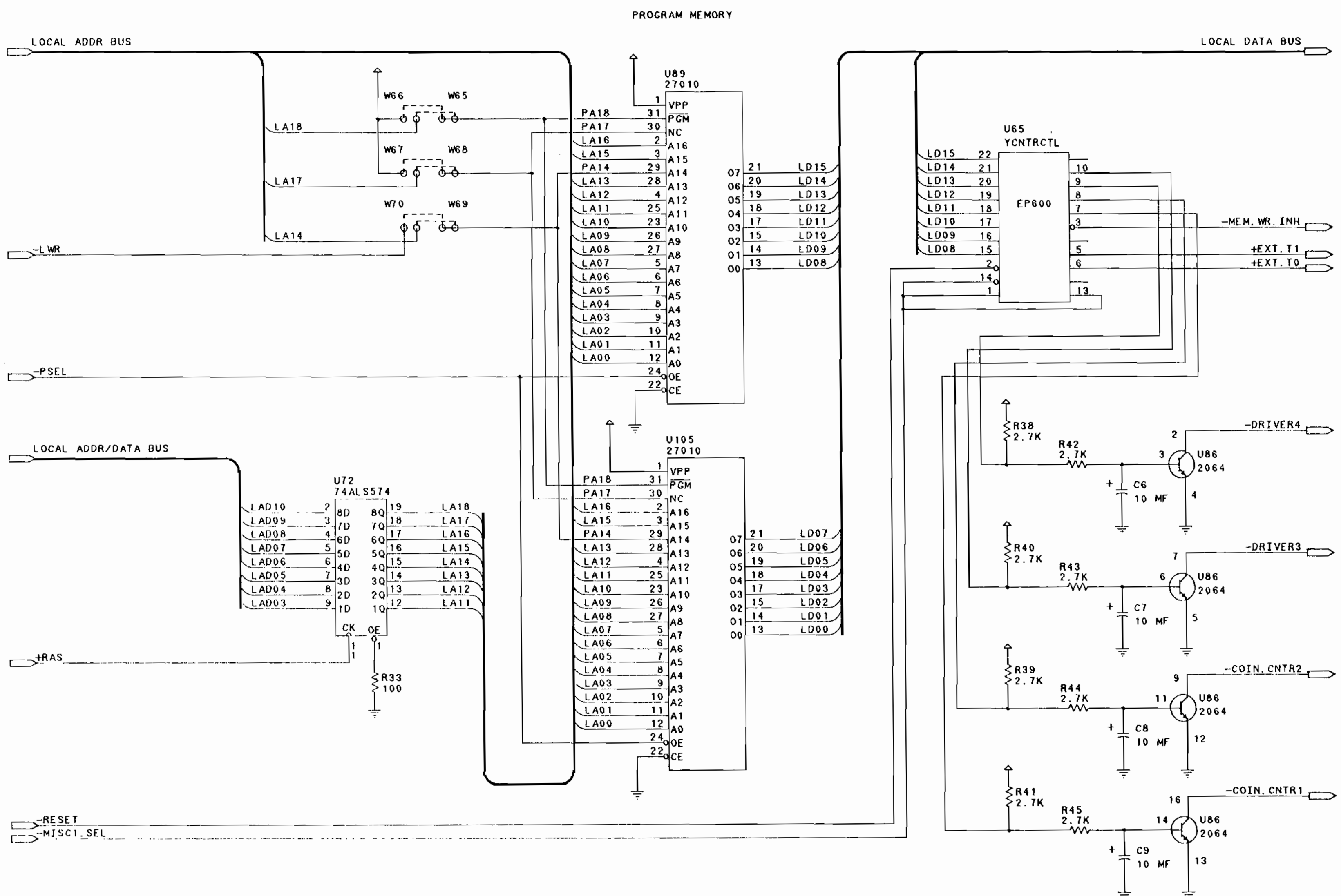
CPU
Sheet 3 of 16

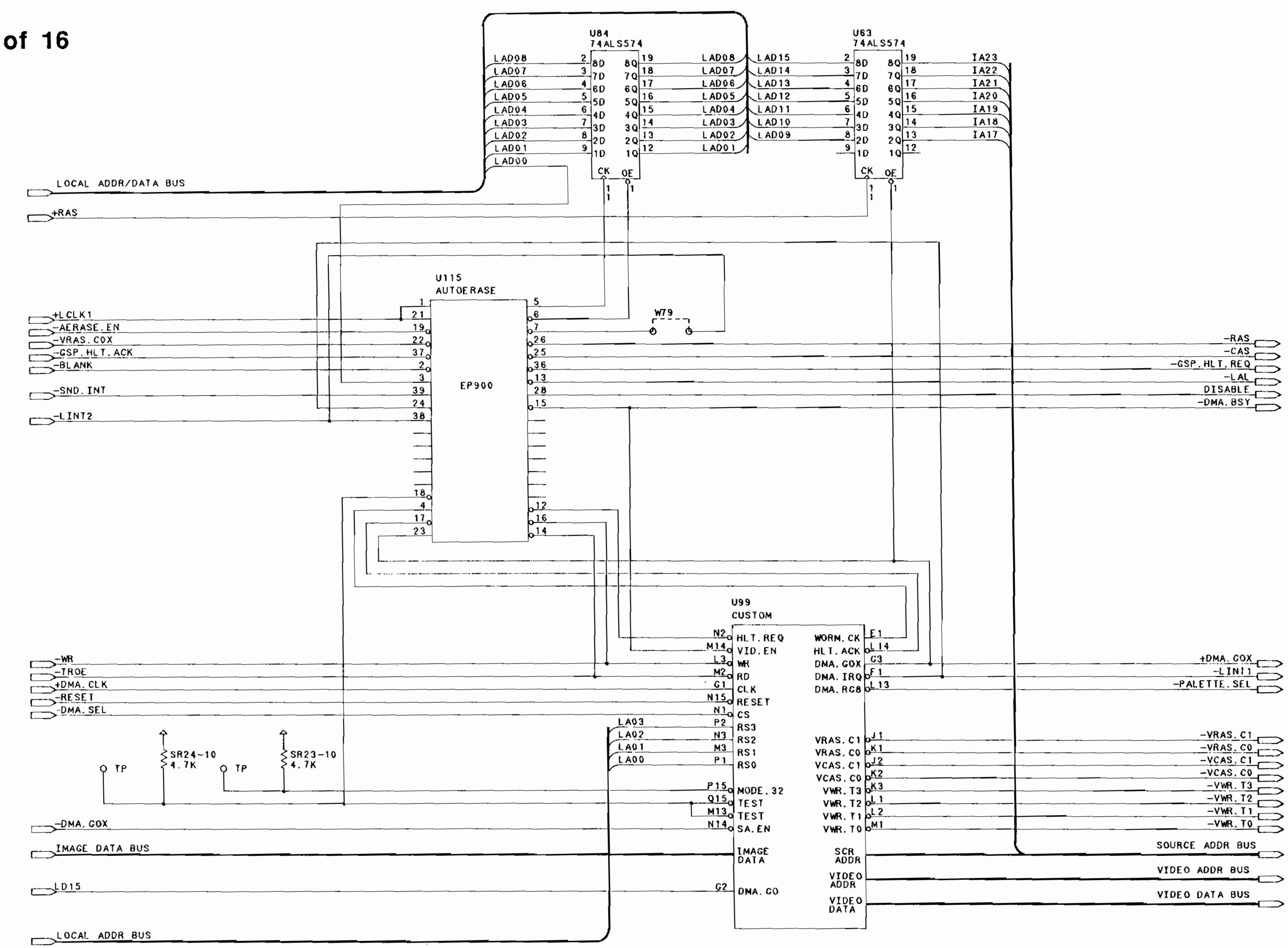


CPU
Sheet 4 of 16

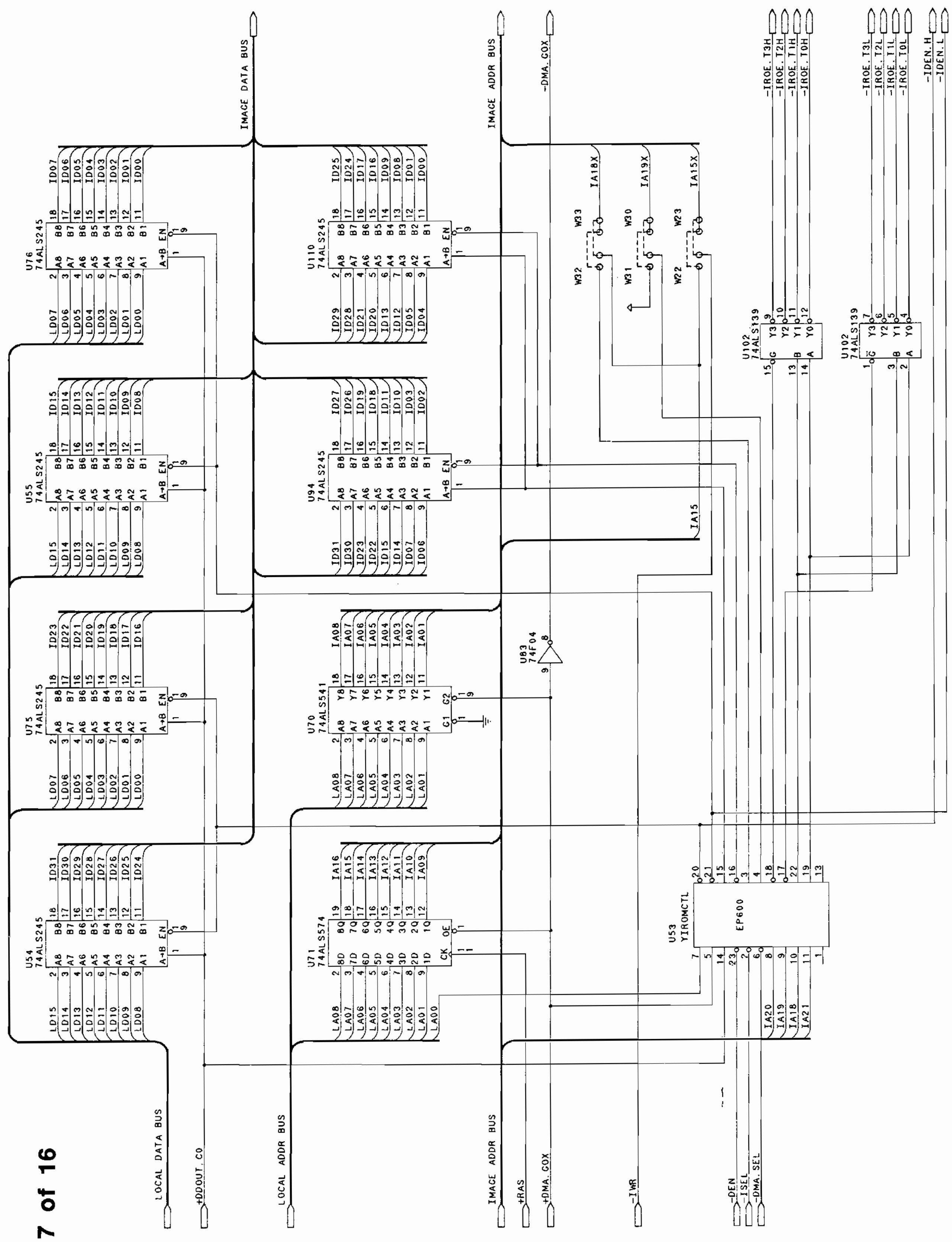


CPU
Sheet 5 of 16



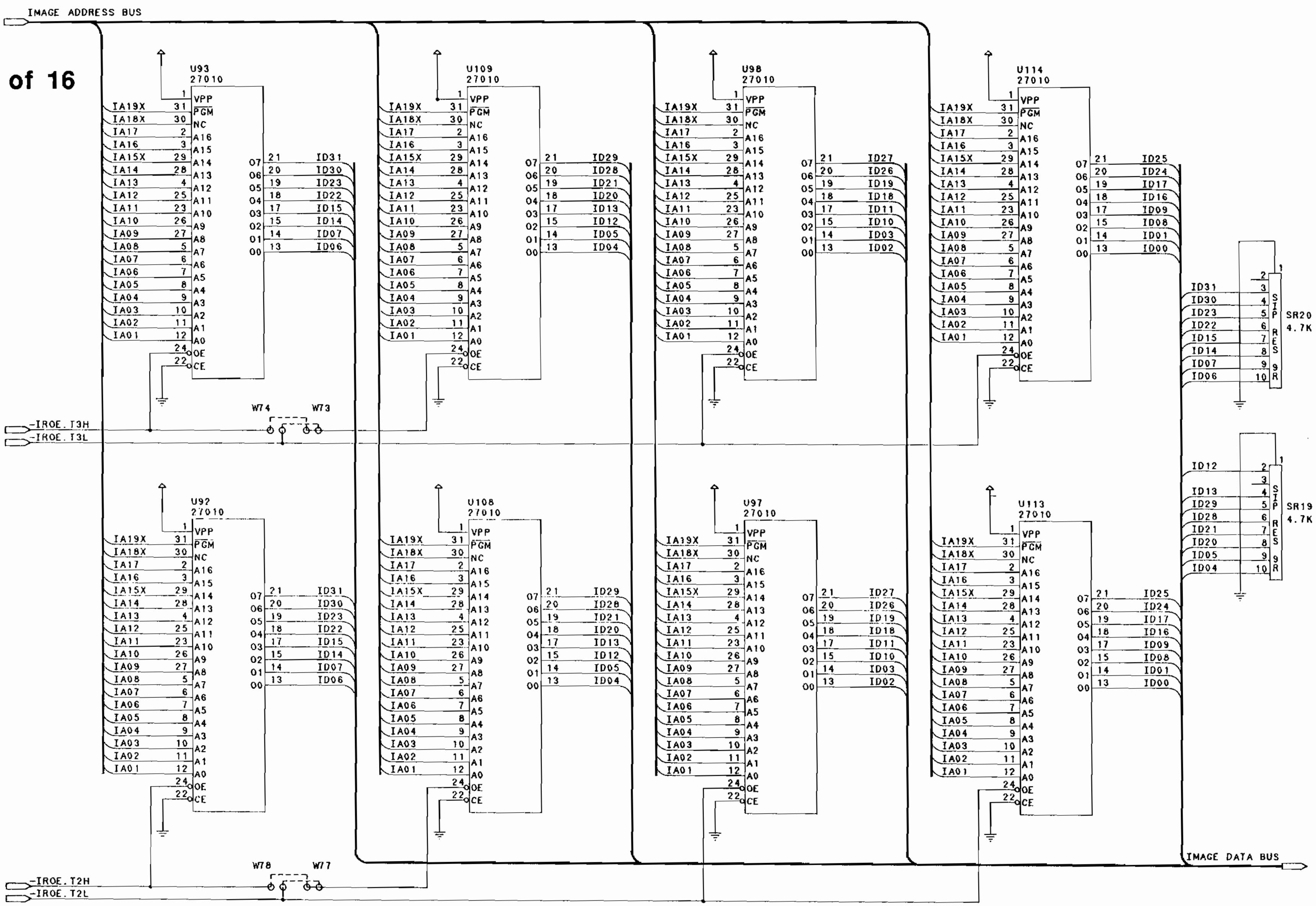

U84
74ALS574
U63
74ALS574
LAD00
LAD01
LAD02
LAD03
LAD04
LAD05
LAD06
LAD07
LAD08
LAD09
LAD10
LAD11
LAD12
LAD13
LAD14
LAD15
IA17
IA18
IA19
IA20
IA21
IA22
IA23
CK
OE
U115
AUTOERASE
EP900
W79
U99
CUSTOM
HLT.REQ
VID.EN
WR
RD
CLK
RESET
CS
RS3
RS2
RS1
RS0
MODE.32
TEST
TEST
SA.EN
IMAGE DATA
DMA.GO
WORM.CK
HLT.ACK
DMA.GOX
DMA.IRQ
DMA.RGB
VRAS.C1
VRAS.C0
VCAS.C1
VCAS.C0
VWR.T3
VWR.T2
VWR.T1
VWR.T0
SCR ADDR
VIDEO ADDR
VIDEO DATA
LOCAL ADDR/DATA BUS
+RAS
+LCLK1
-AERASE.EN
-VRAS.COX
-GSP.HLT.ACK
-BLANK
-SND.INT
-LINT2
-RAS
-CAS
-GSP.HLT.REQ
-LAL
DISABLE
-DMA.BSY
-WR
-TROE
+DMA.CLK
-RESET
-DMA.SEL
LA03
LA02
LA01
LA00
SR24-10
4.7K
SR23-10
4.7K
TP
TP
-DMA.GOX
IMAGE DATA BUS
LD15
LOCAL ADDR BUS
+DMA.GOX
-LINI1
-PALETTE.SEL
-VRAS.C1
-VRAS.C0
-VCAS.C1
-VCAS.C0
-VWR.T3
-VWR.T2
-VWR.T1
-VWR.T0
SOURCE ADDR BUS
VIDEO ADDR BUS
VIDEO DATA BUS

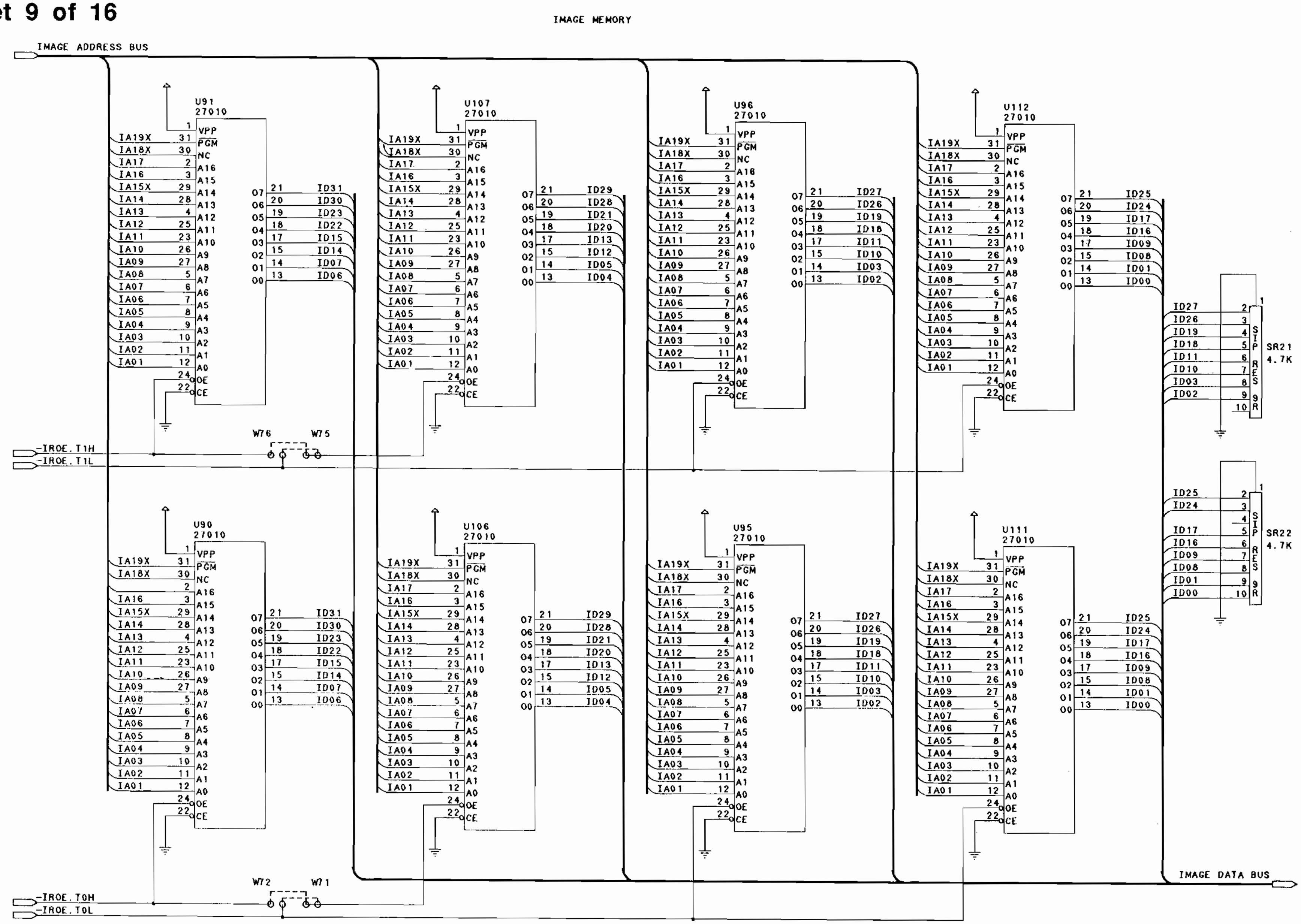
CPU
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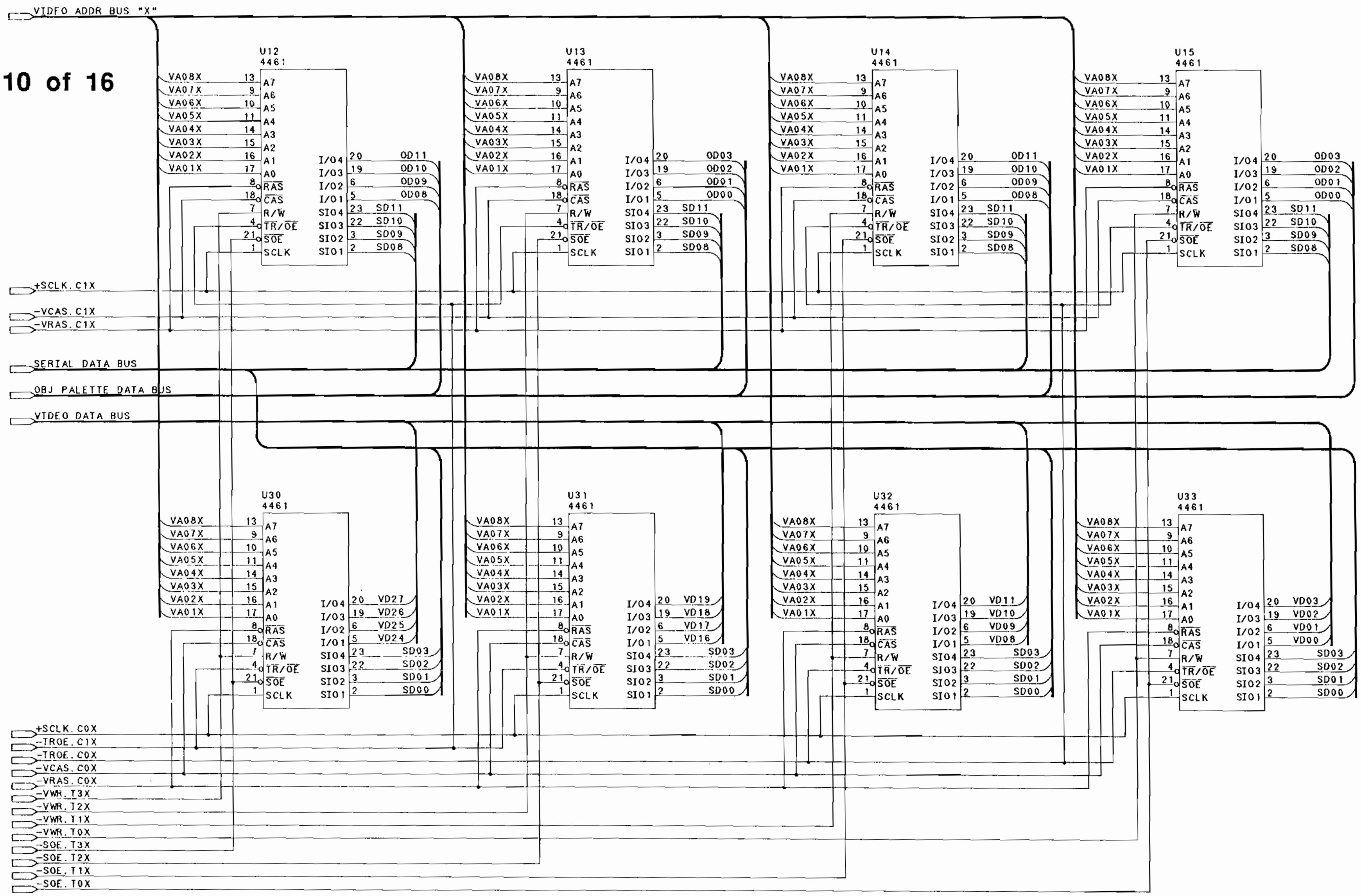
CPU
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IMAGE MEMORY

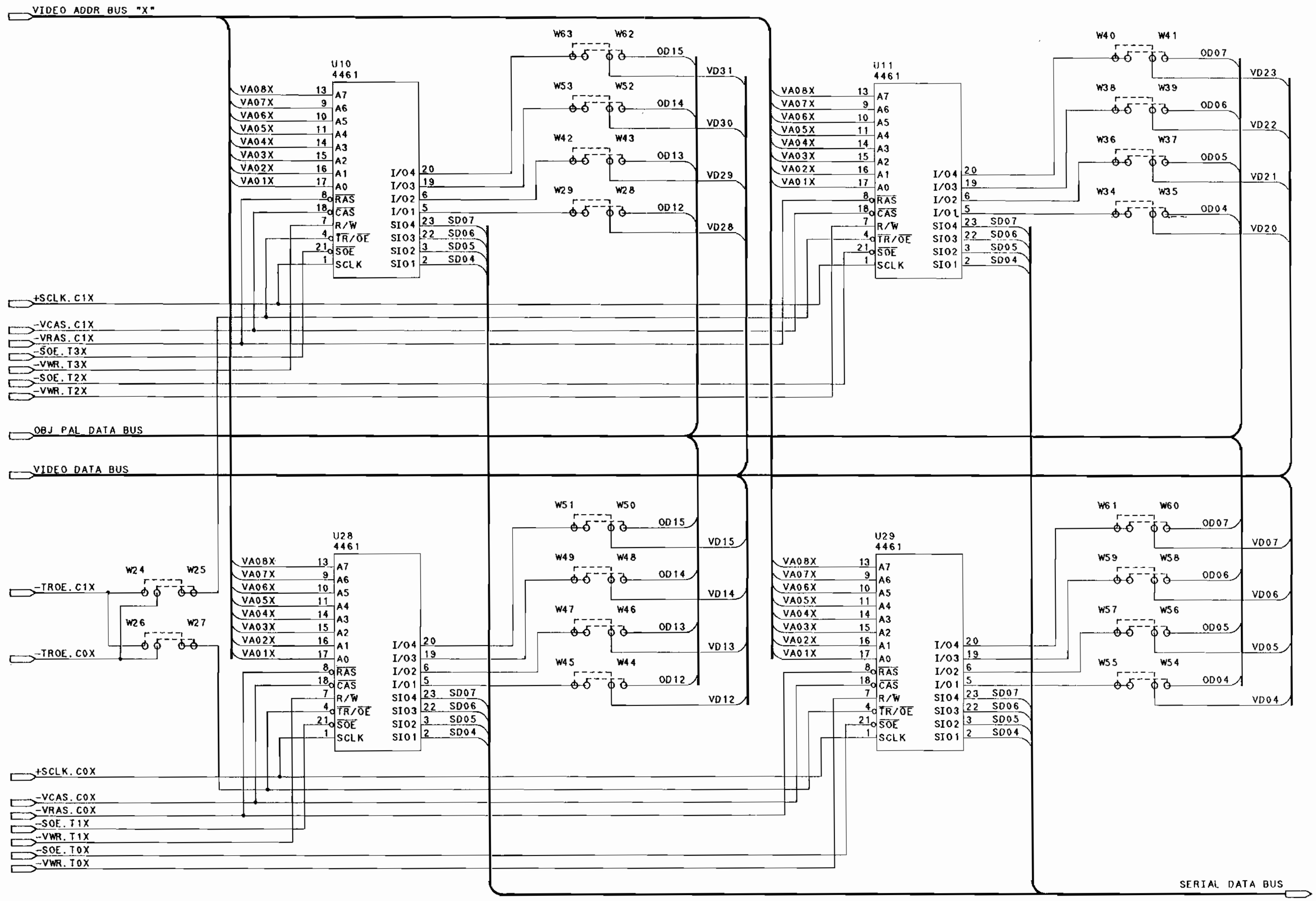



IMAGE MEMORY
IMAGE ADDRESS BUS
IMAGE DATA BUS
U91 27010
U107 27010
U96 27010
U112 27010
U90 27010
U106 27010
U95 27010
U111 27010
SR21 4.7K
SR22 4.7K
W76
W75
W72
W71
-IROE.T1H
-IROE.T1L
-IROE.T0H
-IROE.T0L

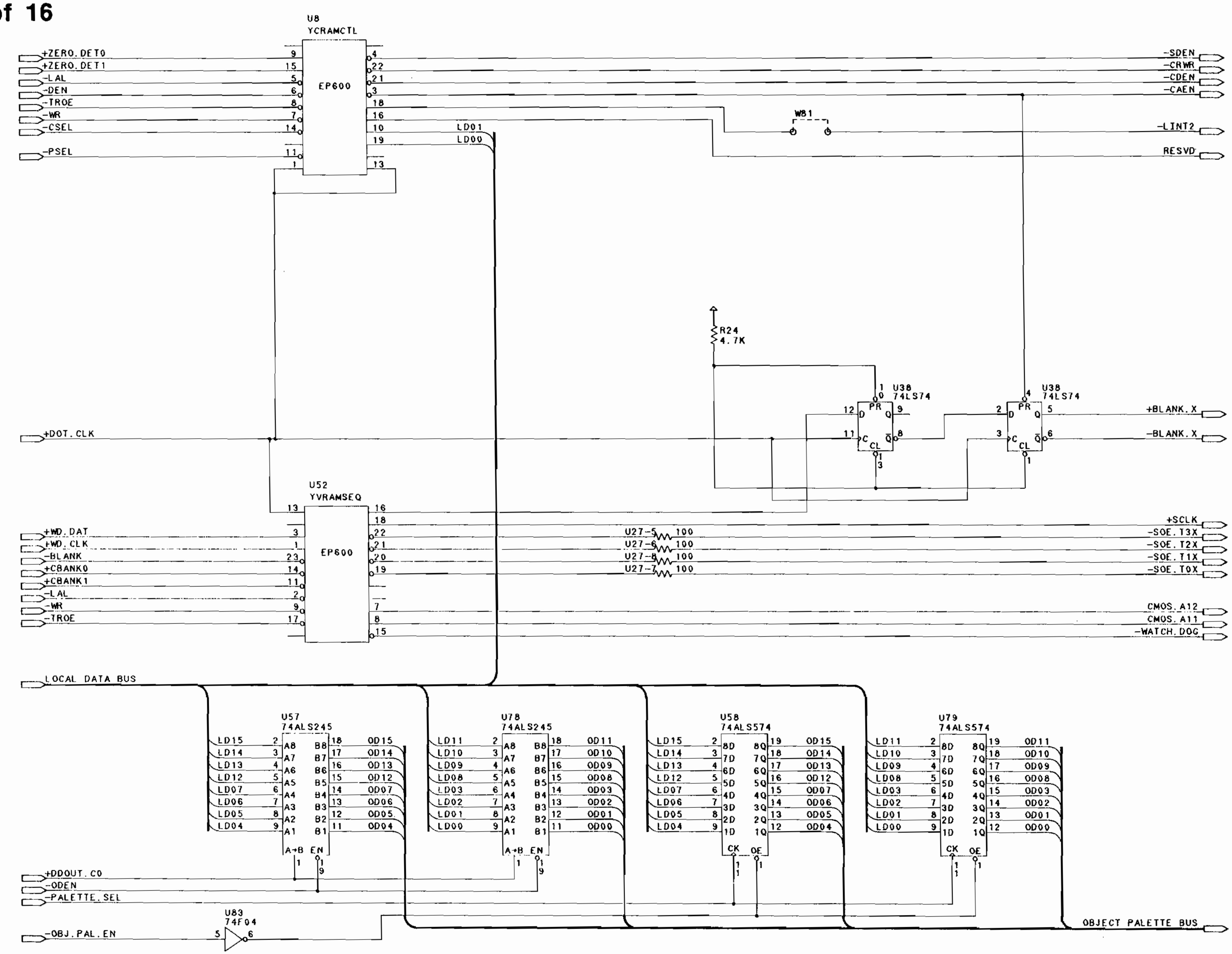
CPU
Sheet 10 of 16

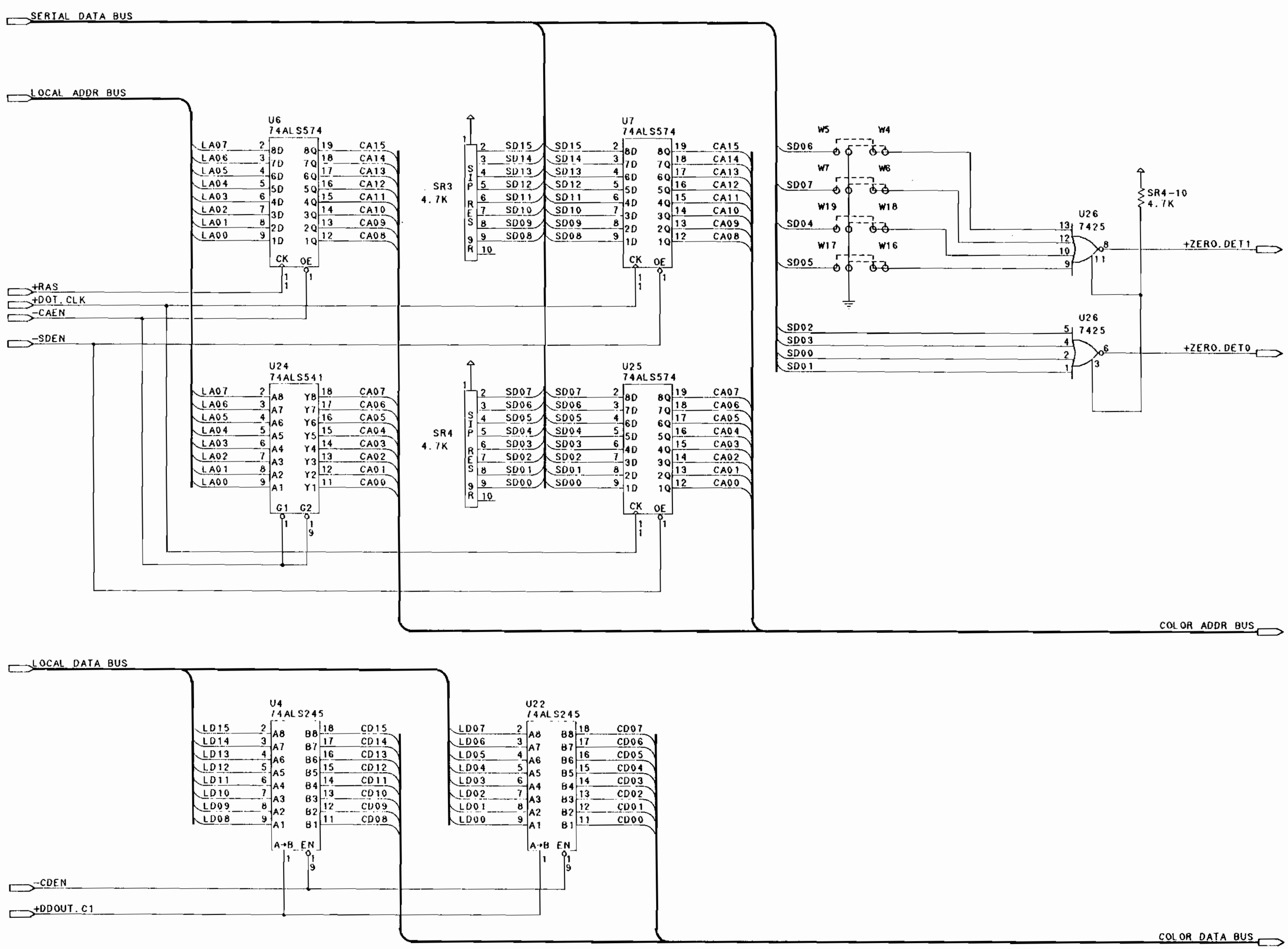


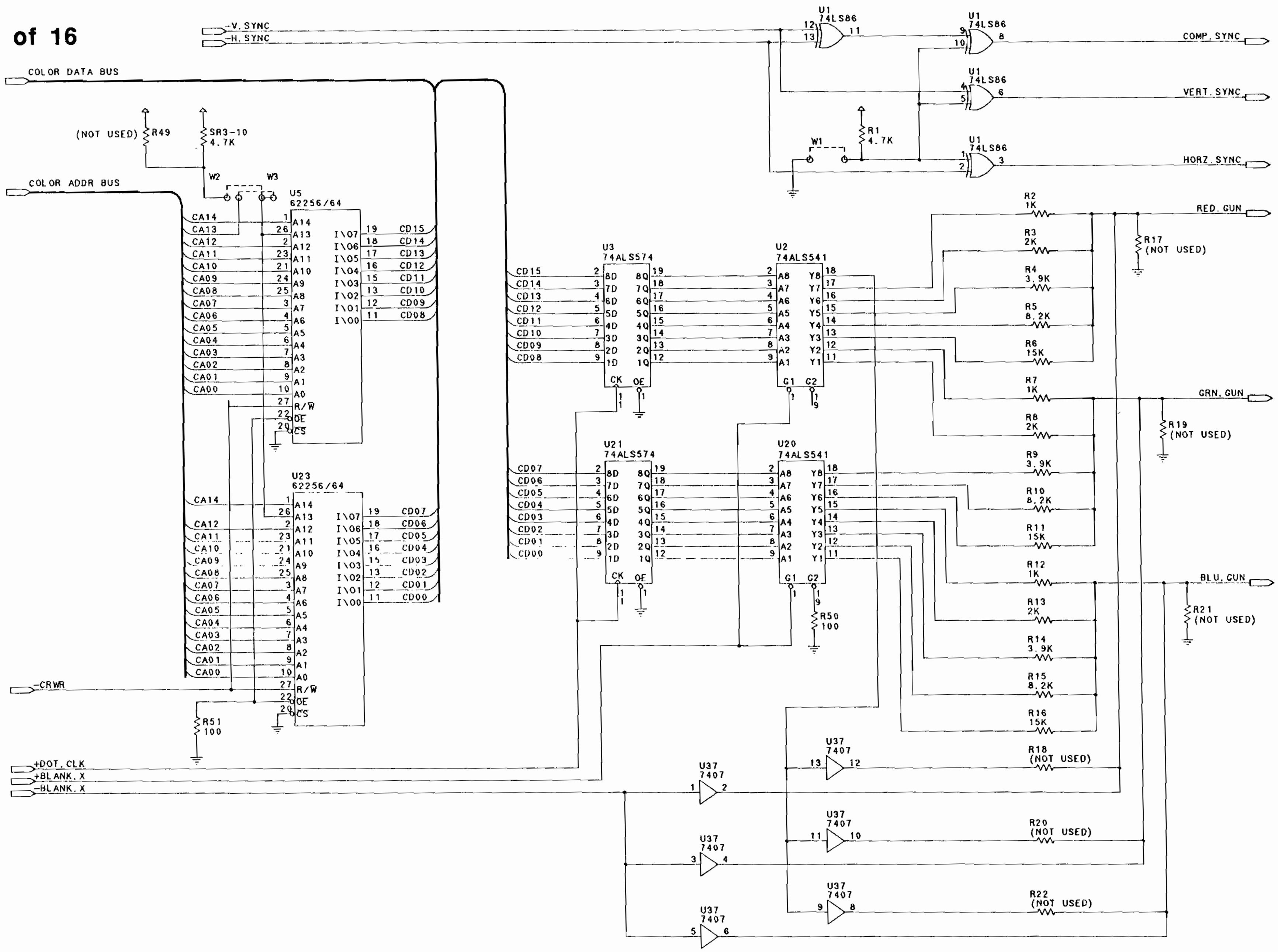
CPU
Sheet 11 of 16



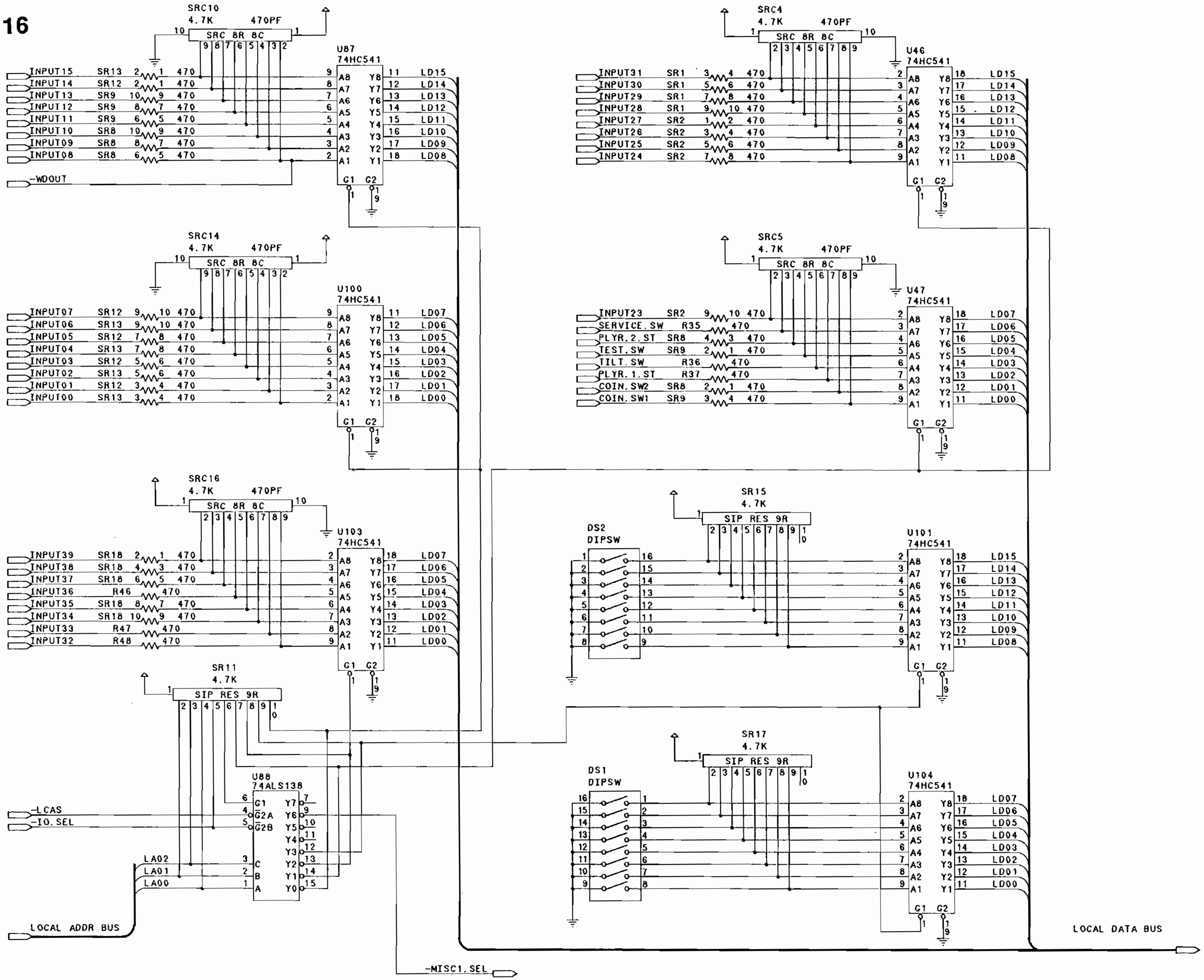
CPU
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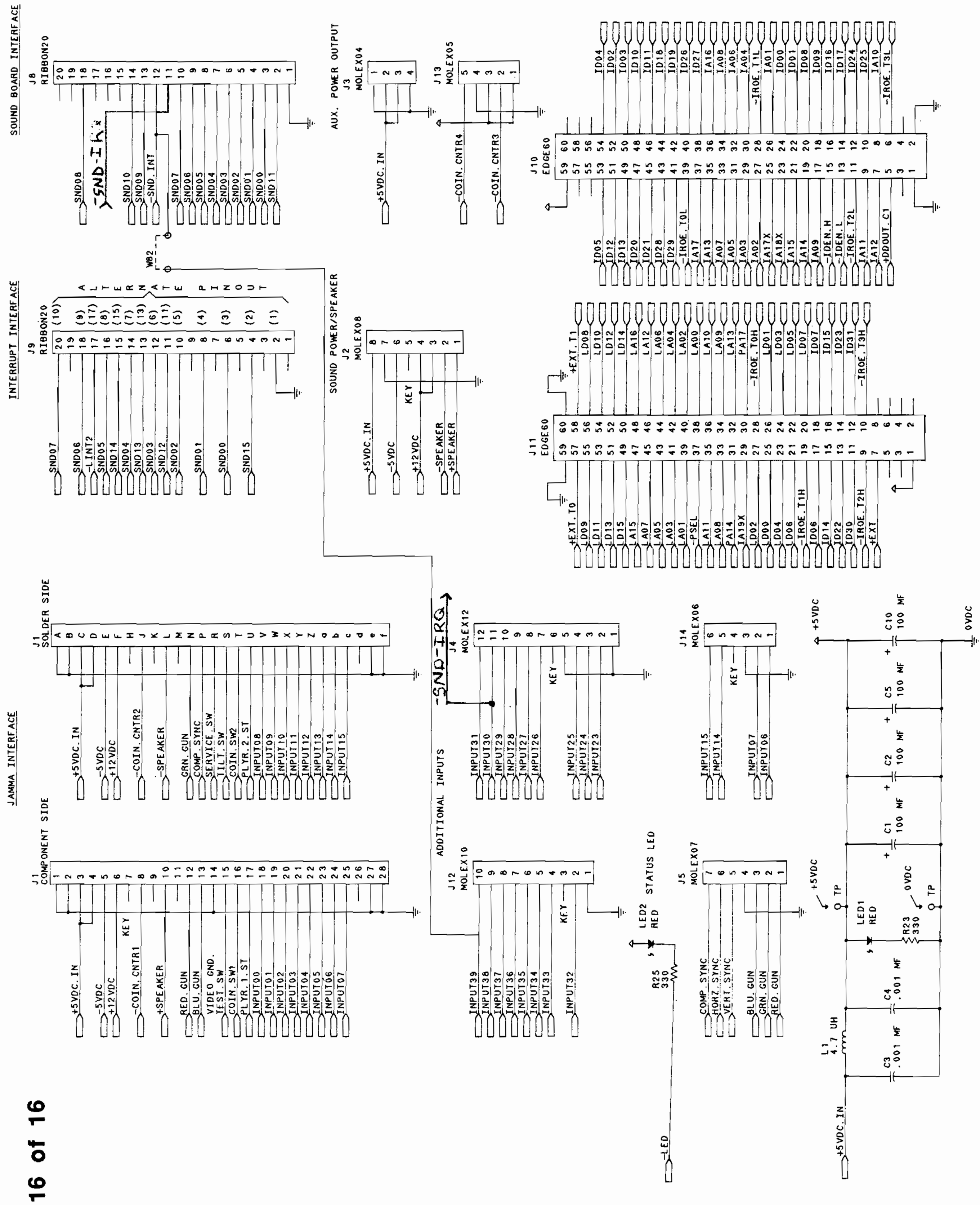



SERIAL DATA BUS
LOCAL ADDR BUS
U6
74ALS574
U24
74ALS541
SR3
4.7K
SR4
4.7K
U7
74ALS574
U25
74ALS574
W5
W4
W7
W6
W19
W18
W17
W16
SR4-10
4.7K
U26
7425
+ZERO.DET1
+ZERO.DET0
+RAS
+DOT.CLK
-CAEN
-SDEN
COLOR ADDR BUS
LOCAL DATA BUS
U4
74ALS245
U22
74ALS245
-CDEN
+DDOUT.C1
COLOR DATA BUS

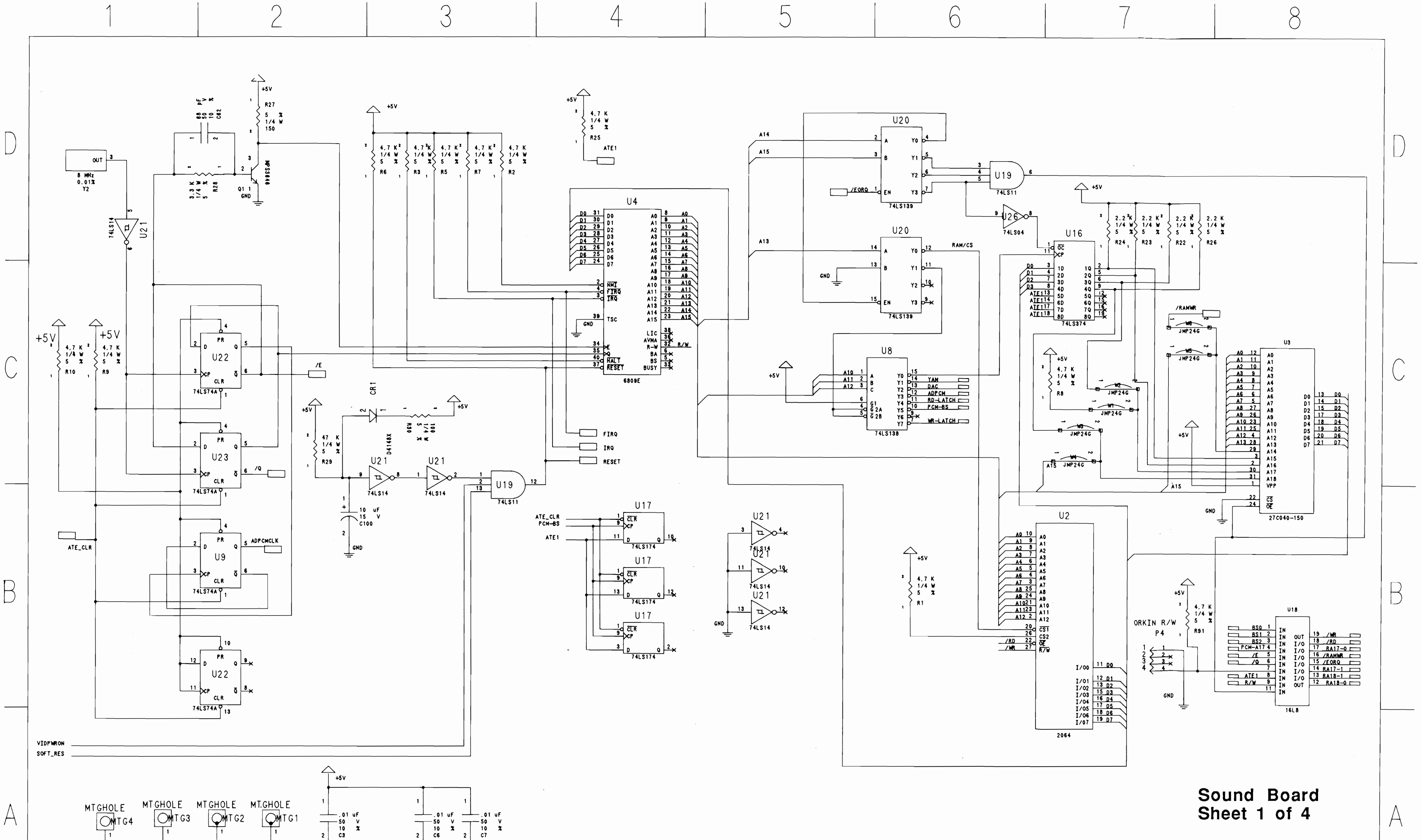

-V. SYNC
-H. SYNC
COLOR DATA BUS
COLOR ADDR BUS
(NOT USED) R49
SR3-10 4.7K
W2
W3
W1
R1 4.7K
U1 74LS86
COMP. SYNC
VERT. SYNC
HORZ. SYNC
RED. GUN
GRN. GUN
BLU. GUN
R17 (NOT USED)
R19 (NOT USED)
R21 (NOT USED)
R2 1K
R3 2K
R4 3.9K
R5 8.2K
R6 15K
R7 1K
R8 2K
R9 3.9K
R10 8.2K
R11 15K
R12 1K
R13 2K
R14 3.9K
R15 8.2K
R16 15K
R18 (NOT USED)
R20 (NOT USED)
R22 (NOT USED)
U5 62256/64
U23 62256/64
U3 74ALS574
U21 74ALS574
U2 74ALS541
U20 74ALS541
U37 7407
R50 100
R51 100
-CRWR
+DOT. CLK
+BLANK. X
-BLANK. X

CPU
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SOUND BOARD INTERFACE
J8 RIBBON20
AUX. POWER OUTPUT
J3 MOLEX04
J13 MOLEX05
INTERRUPT INTERFACE
J9 RIBBON20
SOUND POWER/SPEAKER
J2 MOLEX08
J10 EDGE60
J11 EDGE60
JAMMA INTERFACE
COMPONENT SIDE
SOLDER SIDE
J1
ADDITIONAL INPUTS
J12 MOLEX10
J4 MOLEX12
J14 MOLEX06
J5 MOLEX07
STATUS LED
LED2 RED
R25 330
LED1 RED
R23 330
L1 4.7 UH
C3 .001 MF
C4 .001 MF
C1 100 MF
C2 100 MF
C5 100 MF
C10 100 MF
+5VDC
0VDC
TP
W82
-SND-IRQ

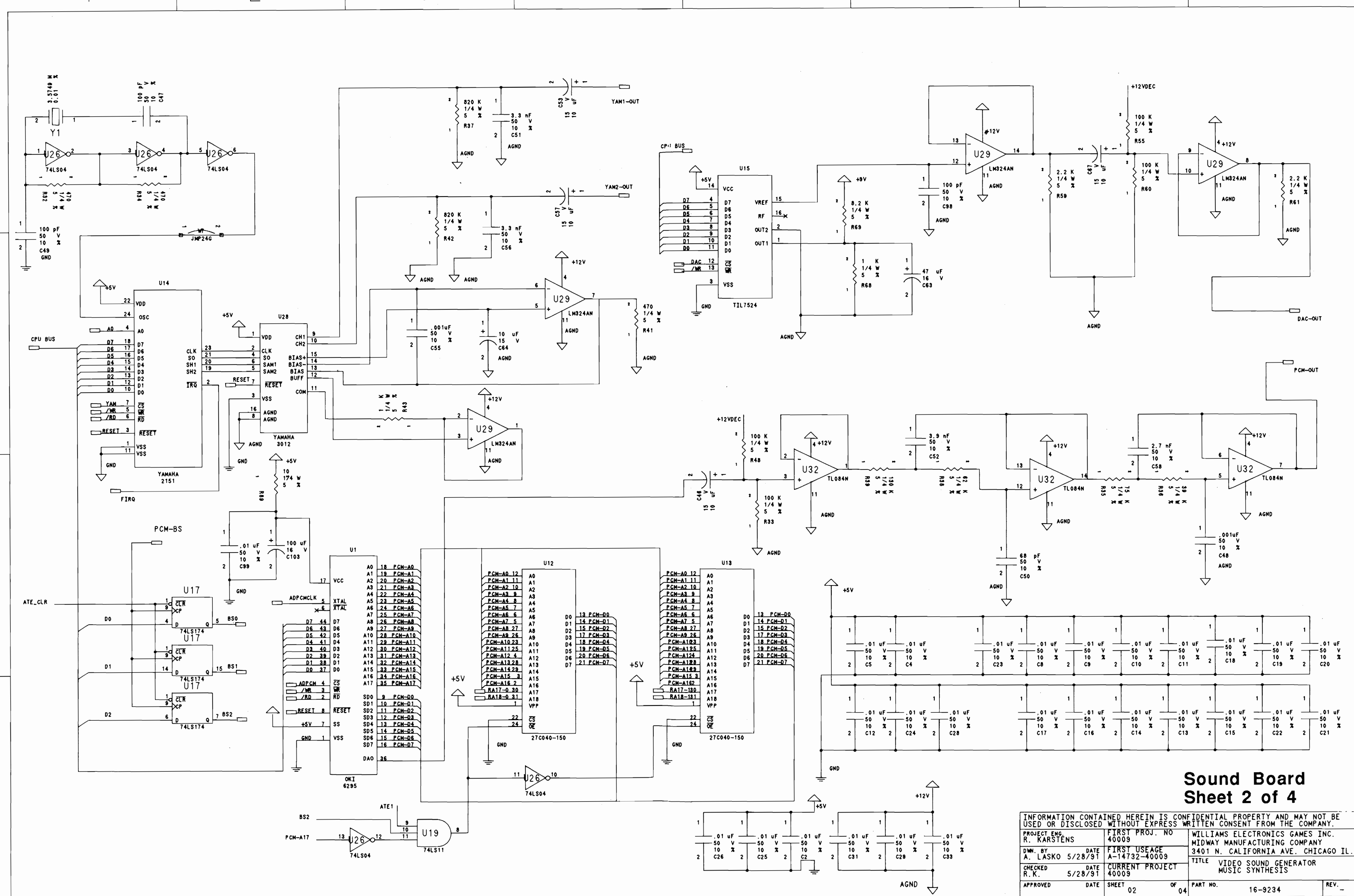
REV	DESCRIPTION	ECN NO.
-	NDR 7-22-91	27317



Sound Board
Sheet 1 of 4

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DWN. BY A. LASKO DATE 5/28/91	FIRST USEAGE A-14732-40009	TITLE VIDEO SOUND GENERATOR SPEECH SYSTHESIS
CHECKED R.K. DATE 5/28/91	CURRENT PROJECT 40009	
APPROVED DATE	SHEET 01 OF 04	PART NO. 16-9234 REV. -

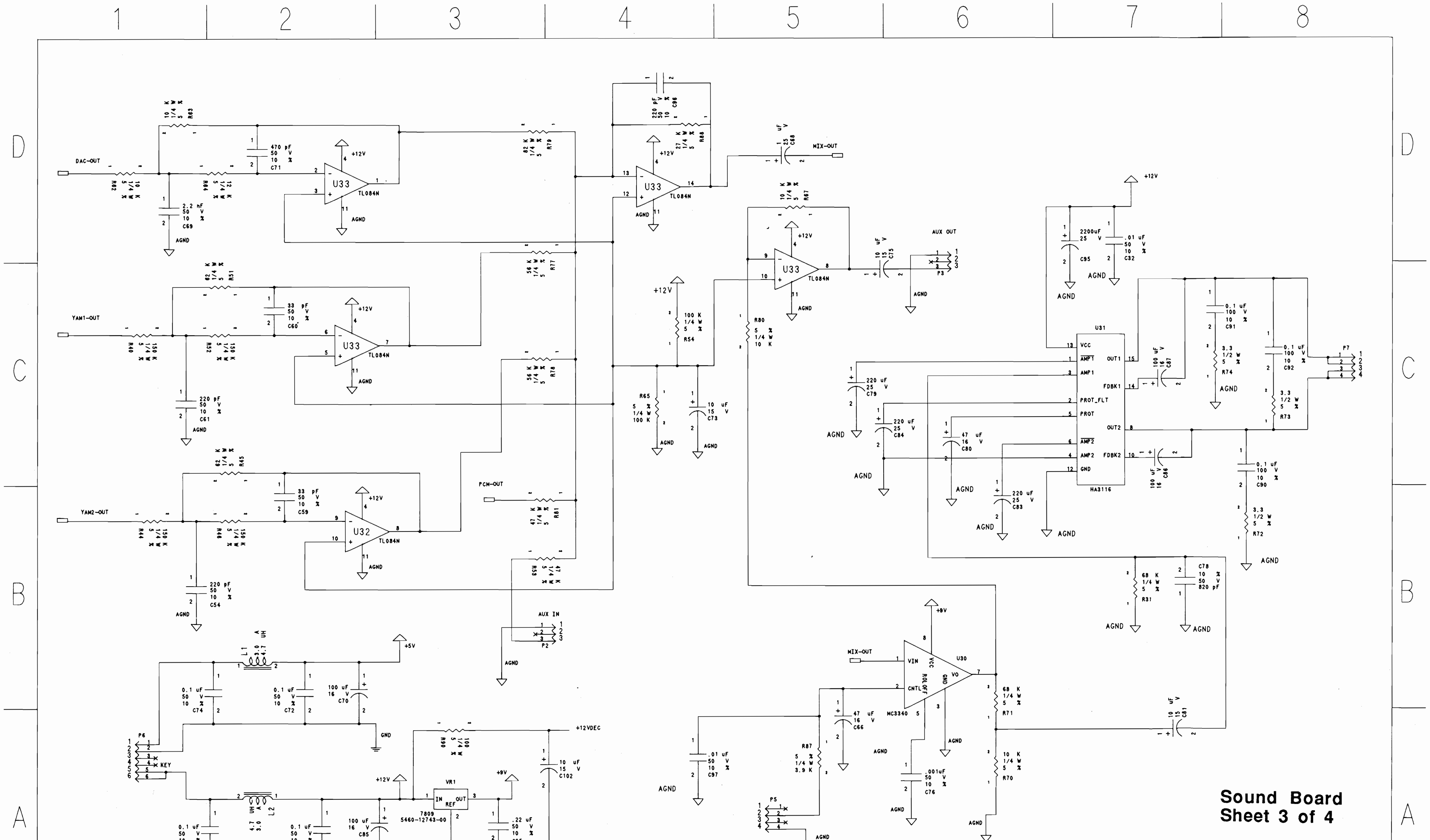


Sound Board
Sheet 2 of 4

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CHECKED R.K. DATE 5/28/91	CURRENT PROJECT 40009	
APPROVED DATE	SHEET 02 OF 04	PART NO. 16-9234 REV. -

REV	DESCRIPTION	ECN NO
-	1128 7-22-91	27318

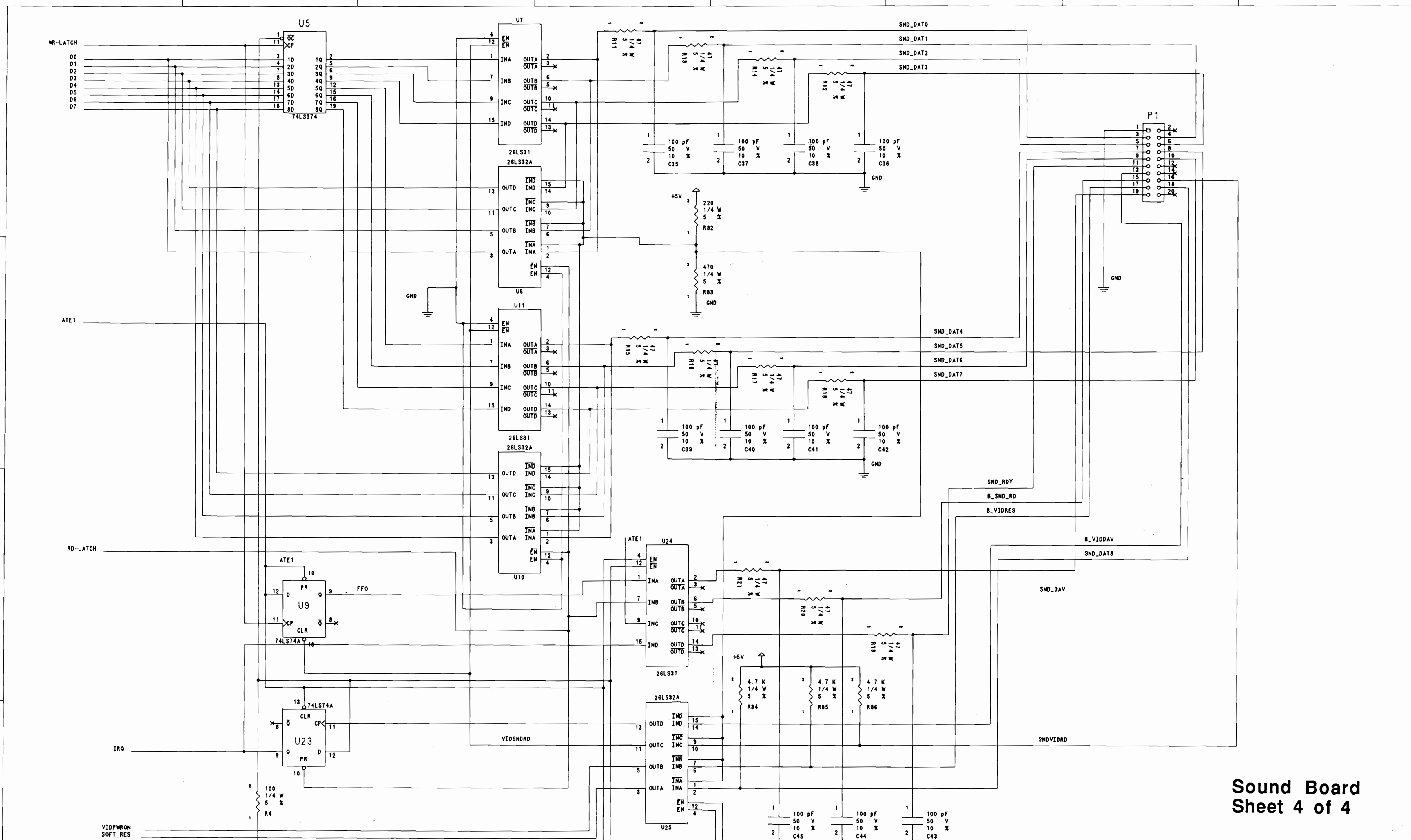


Sound Board
Sheet 3 of 4

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DWN. BY A. LASKO DATE 5/28/91	FIRST USEAGE A-14732-40009	
CHECKED R.K. DATE 5/28/91	CURRENT PROJECT 40009	TITLE VIDEO SOUND GENERATOR AMPLIFIER
APPROVED DATE	SHEET 03 OF 04	PART NO. 16-9234 REV. -

REV	DESCRIPTION	ECN
	VPR 7-22-91	27319



Sound Board
Sheet 4 of 4

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DWN. BY A. LASKO DATE 5/28/91	FIRST USEAGE A-14732-40009	
CHECKED R.K. DATE 5/28/91	CURRENT PROJECT 40009	TITLE VIDEO SOUND GENERATOR INTERFACE
APPROVED DATE	SHEET 04 OF 04	PART NO. 16-9234 REV. -

Control Panel Wire Colors

Player One

Start	Yellow-Green
Up (Jump)	Orange-Black
Down (Duck)	Orange-Brown
Left (Move)	Orange-Red
Right (Move)	Orange
High Punch	Orange-Yellow
Block	Orange-Green
High Kick	Orange-Blue
Low Punch	Orange-Violet
Low Kick	Orange-Gray
Ground	Black

Player Two

Start	Yellow-Blue
Up (Jump)	Yellow-Black
Down (Duck)	Yellow-Brown
Left (Move)	Yellow-Red
Right (Move)	Yellow-Orange
High Punch	Yellow-Violet
Block	Yellow-Gray
High Kick	Violet-Black
Low Punch	Violet-Brown
Low Kick	Violet-Red
Ground	Black

PC Board Jumpers

CPU Board

W2, W8, W11, W12, W14,
W21, W22, W24, W27, W29,
W30, W32, W34, W36, W39,
W41, W42, W45, W47, W48,
W50, W52, W55, W57, W58,
W60, W62, W65, W68, W69,
W71, W73, W75, W77, W80

Sound Board

W2, W3, W5, W7, W8

WARNINGS & NOTICES

Warning
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* For safety and reliability, substitute parts and modifications are not recommended.
* Substitute parts or modifications may void FCC type acceptance.
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Warning
Prevent shock hazard and assure proper game operation. Only plug this game into a properly grounded outlet. Do not use a cheater plug to defeat the power cord's grounding pin. Do not cut off the ground pin.

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